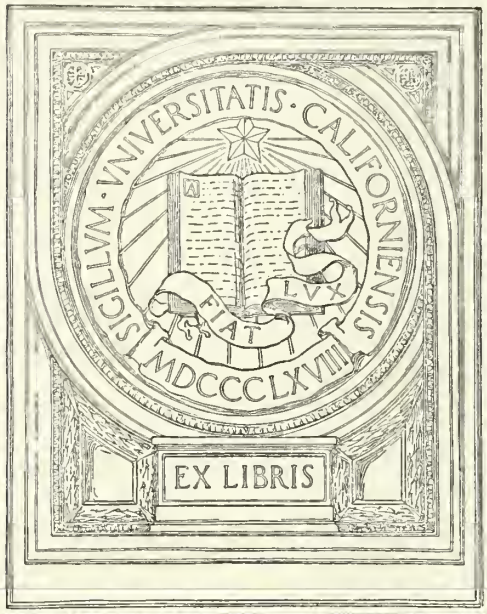
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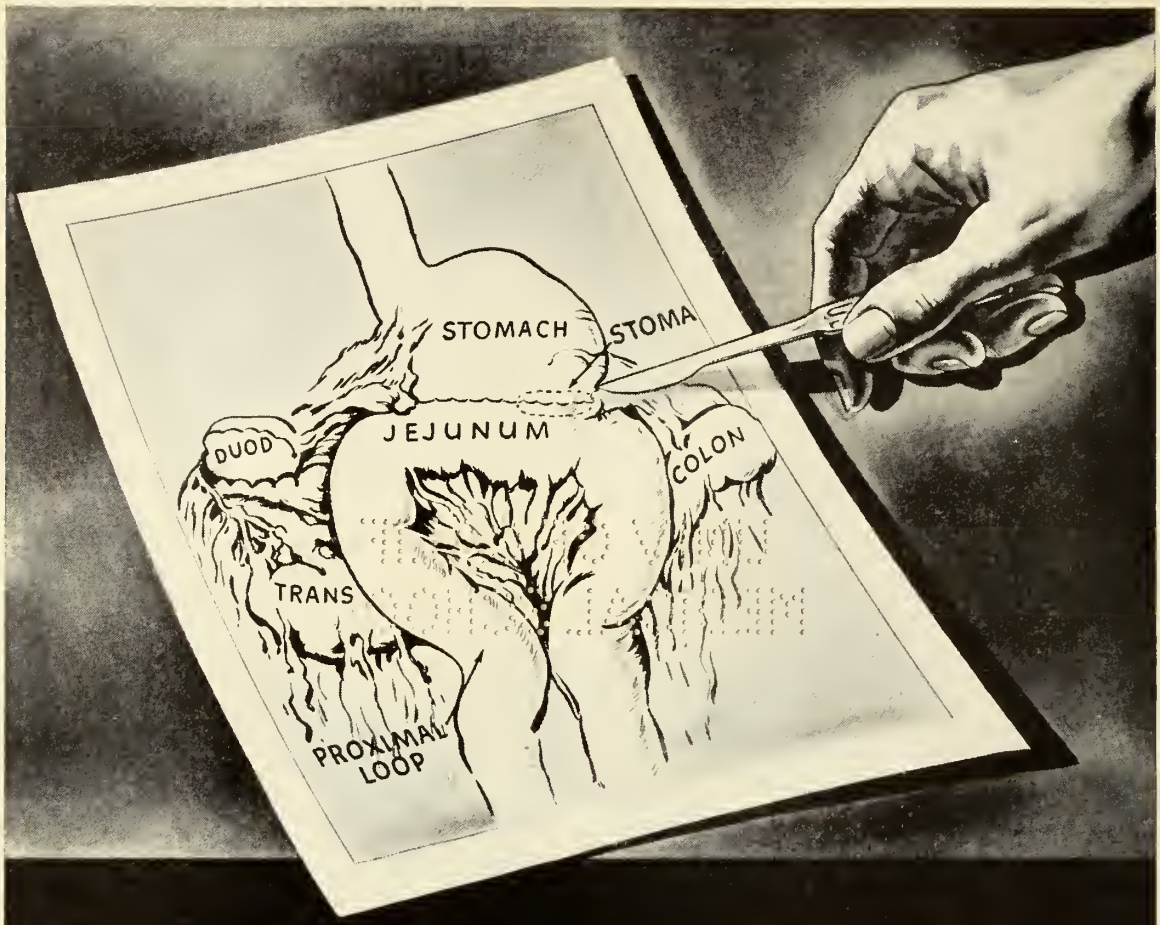
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1. MARSHALL, S. F., and DEVINE, J. W., Jr.: Gastrojejunal Ulcer, S. Clin. North America, 713-761 (June) 1941.

2. FAULEY, G. B.; FREEMAN, S.; IVY, A. C.; ATKINSON, A. J., and WIGODSKY, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med. 67: 563-578 (March) 1941.

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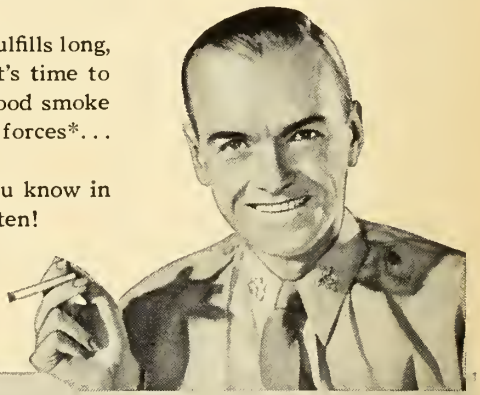
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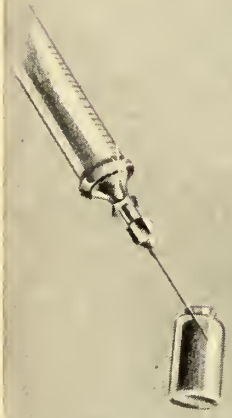
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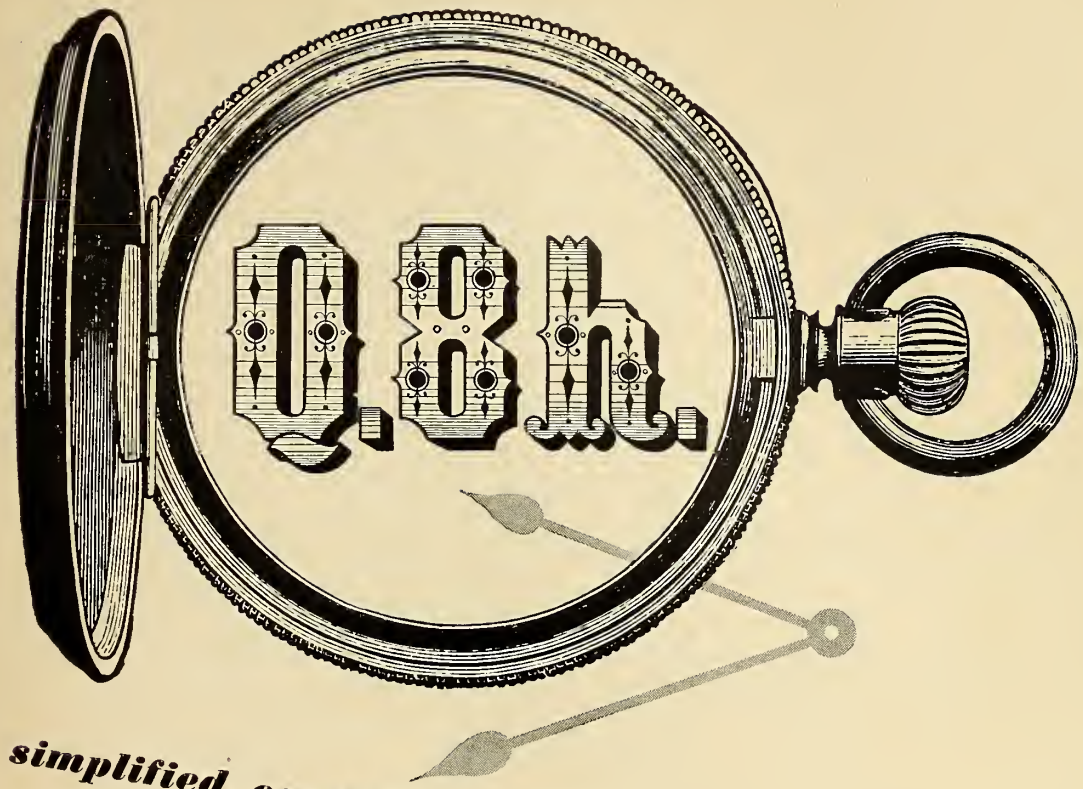
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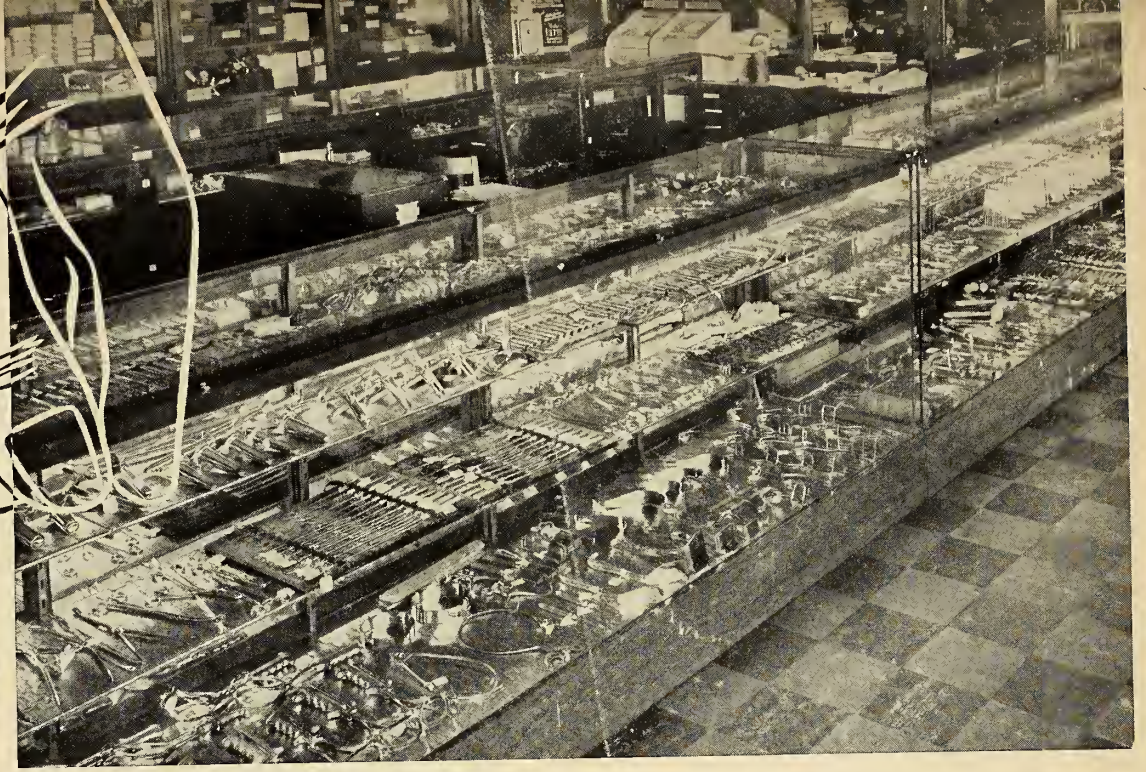
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FIGHT INFANTILE PARALYSIS · JANUARY 14 TO 30

PRESIDENT'S PAGE

IN this first issue of "*Arizona Medicine*" your president feels that it is incumbent upon him to again call to the attention of every member of our association the insidious attempt which is being made to supplant the private practice of medicine by complete federalization. Specifically the Wagner-Murray-Dingell bill now before Congress, an analysis of which is published elsewhere in this Journal, if passed, will make the Surgeon General of the United States Public Health Service the dictator of medical practice and of dentistry, nursing and hospitalization as well.

The above named bill is a broad, far reaching socialistic measure and tucked away in what was a rather inconspicuous corner, until recent publicity brought it to light, is the section pertaining to our profession. It is worth while to reiterate details. This Czar, a political appointee, would have authority to employ doctors at fixed salaries and fees, to provide medical care, to determine arbitrarily which hospitals or clinics could provide services, to fix hospital room and ward rates. The present one percent Social Security tax paid by self-employed individuals, such as physicians, would be raised to seven percent, while the one percent now paid by employees and corporations would be raised to six percent for each of these groups. Think of the effect of a ten percent tax increase on labor and on capital! Contemplate for a moment the tremendous bureaucracy and the enormously increased federal payroll resulting! Of the twelve billion dollars raised annually, three billion would be set aside for use in administrating the medical provisions of the law. Enough funds would be at hand for the government to take over and operate all of the medical schools of the country should those in charge not approve of the private administration of these institutions.

Here before us we have the beginning of complete regimentation. Do not think that medicine alone is involved. Medicine was chosen first because it is most vulnerable, but law, engineering, banking and all other walks of life would most surely follow. The American Bar Association has already, in no uncertain terms, condemned this attempted usurpation.

We are told that medicine constitutes such a small group that it can be politically disregarded. Let us by every means possible refute such error. Let each one of us start his own campaign of education now to give to our legislators, to our patients and to our friends in other callings, the real facts of this impending legislation. Let us work doubly hard to take up the burden of the fifty thousand politically impotent physicians who are in the armed forces, to prevent the consummation of this colossal mistake. If we are fighting for four freedoms let us fight for one more, for the simple, democratic, American freedom to practice medicine.

O. E. Utzinger, M.D.

THE REPAIR OF SEVERED TENDONS A NEW TENDON SUTURE

CLARENCE E. REES, M. D.
Rees-Stealy Clinic
San Diego, Calif.

THE surgical repair of injuries in which tendons are severed merits special consideration because of (1) the relative avascularity of tendons, (2) the histological structure of tendon tissue, and (3) the tonicity of the muscles, which is accentuated by injury. The first requires meticulous asepsis; the second requires a special type of suture; the third requires splinting and protection of the line of suture from unusual tension.

At the outset I would like to stress the importance of aseptic preparation and technique, and to suggest that repair be attempted only under the best conditions available. Tendon repair should not be considered as a surgical procedure suited to ordinary office practice; it merits the best facilities and instruments obtainable.

Whether primary tendon repair or preliminary treatment of the wound with secondary or delayed suture of the tendon is to be carried out, requires careful consideration and a keen appreciation of the factors involved. Each operator must call on his own experience and ingenuity to determine the proper procedure in the individual case. The character of the wound and its cause, the time that has elapsed since the injury, and the type of first-aid treatmen administered before the patient is seen by the surgeon, are among the deciding factors. Wounds made by relatively clean and sharp objects, and seen within the arbitrary six-hour period following injury, may be repaired at once providing there is no evidence of active infection. If more than six hours has elapsed since injury; if the wound was made by dirty objects or contains foreign material and is obviously contaminated; or if there is marked laceration of tissue, suturing of the tendons should not be attempted at the time of the initial surgical treatment. In such cases the likelihood of tendon slough with loss of tissue would complicate the then necessary later repair. At the time of preliminary treatment, however, the proximal end of the tendon may be sutured to some surrounding firm structure in order to minimize retraction and thus facilitate the second procedure. Bove has reported a method of tendon transfixion by means of a small steel pin which passes through the tendon and surrounding structures at some distance proximal to the wound. This is described as a tendon suture method but it could be used to advantage in transfixing tendons which cannot be sutured until later. Secondary repair should not be attempted until all signs of inflammation have subsided,—the color of the tissues should be normal and all induration should have disappeared.

The availability of the sulfonamides for local instillation should not influence the operator to discard the lessons of experience and cause him to undertake too extensive operative repair, nor should it cause him to lessen his observance of aseptic technique. The value of these drugs should not be underestimated but our reliance upon them should not encourage us to overreach or to become careless.

The treatment of contaminated and lacerated wounds varies from wound freshening plus the use of a sulfonamide to the radical debridement procedures of the last war. The condition of the wound at the time it is first observed must determine the course to follow. Three requirements, however, would seem to be apparent, namely, that all visible foreign material should be removed; that all devitalized tissue should be removed; and that only the minimum amount of suture material consistent with good repair should be allowed to remain in the wound.

The two-stage procedure has received sufficient support to prove its worth and one should not be influenced against it by fear of criticism from colleagues or the possibility of malpractice. Experience has shown that in certain wounds and under certain circumstance, primary suturing is not the proper procedure. An explanation of the situation to the patient and/or relatives and employer avoids the dan-

Read before the Arizona State Medical Society, Tucson, Arizona, May the 1st, 1943.

ger of malpractice suits and changes the psychological viewpoint of the patient from one of discouragement regarding his disability to one of hopeful expectancy and eagerness for his secondary repair.

It is not necessary to stress the importance of careful examination of tendon function distal to the site of injury, prior to repair. Such examination is basic in the treatment of injuries.

The preoperative preparation and general operating technique have been well outlined by Mason and others. The preoperative preparation consists of shaving, and cleansing the wound and surrounding parts with soap and large quantities of water. Common antiseptics should not be used because of their distructive action on exposed tissues. A sphygmometer cuff placed well above the operative field provides hemostasis, and the entire dissection, to the point at which the tendons are recovered and are ready for suturing, is carried out before the pressure in the cuff is released. With the release in pressure all bleeding points are ligated with the smallest ligature material consistent with the size of the vessels. When hemosasis is complete the tendon is sutured. The wound is then closed and pressure dressing is applied.

If necessary, the line of incision should be extended without hesitation. Generally speaking, the midline of the fingers should be avoided and the palmar creases should not be crossed. When the proximal end of the tendon has retracted a second incision should be made high over its normal course in order to recover the end of the tendon, replace it in its channel, and draw it into the operative field. This would seem to be a much better procedure than the endless blind fishing for a lost end. The use of the Esmark bandage to deliver a proximal tendon into the site of operation has not been of help in our experience.

In lacerated wounds with loss of covering, every attempt should be made to cover the tendon either with fat or skin as the tendon tends to slough on exposure. Contact between lines of suture and between suture lines and drains should be avoided since healing is retarded in both instances.

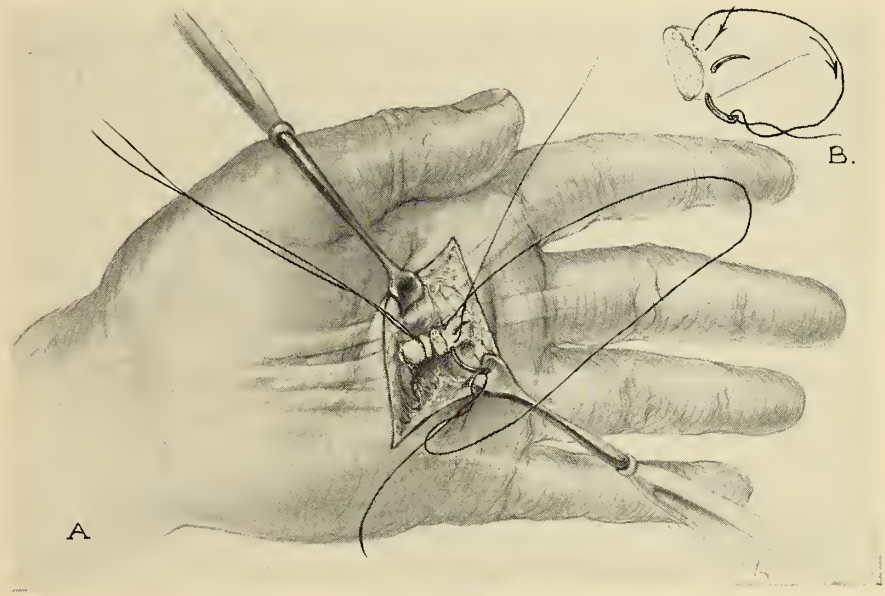


FIGURE I.
One encircling suture placed and the second one being placed Insert shows direction of needle in making inside loop.

The actual repair of recently severed tendons is not the simple procedure that is usually demonstrated in text-books and articles on the subject. The illustrations are usually diagramatic and do not approximate the situation encountered or the finished operation. Actually tendons are made up of white collagenous fibers so loosely bound together that the interstitial tissue is not firm enough to hold a suture under muscle tension. It is quite apparent that repair by simply suturing the ends together is not possible and that innovations are necessary

to obtain satisfactory results. In any satisfactory method, the suture must encircle more or less of the fibers in a noose-like manner in order to have stability. All accepted procedures for suturing tendons follow this principles.

It has been demonstrated that when suture material lies between the sutured ends, healing is retarded because foreign body reaction may supercede fibrosis. Furthermore, it has been demonstrated that contricting delay healing because of the retardation of blood circulation which at best is minimal in these structures. The most advocated methods merely stabilize the ends in close proximity and depend upon splinting to avoid tension until healing has progressed sufficiently to allow motion.

When tendons are sutured in the usual manner there is often a widening at the line of union because the ends tend to fray. Then when the ends are approximated they spread and an actual increase in bulk in addition to that of the approximating sutures is produced at the line of union. The disadvantage of prolonged splinting is that the tendon ends heal to the surrounding sheath or structures as well as to each other and unless careful follow-up therapy and observation are available the result may be fixation at the site of suture or separation of the ends with resulting diminution or loss of function.

We believe that the following method of suturing tendons meets all the requirements for good tendon repair and avoids some of the disadvantages of the advocated methods: (1) it does not interfere sufficiently with the circulation of the central fibers to prevent prompt healing; (2) it is stable enough to permit early motion of the injured tendon; (3) it maintains the normal tendon contour at the site of union.

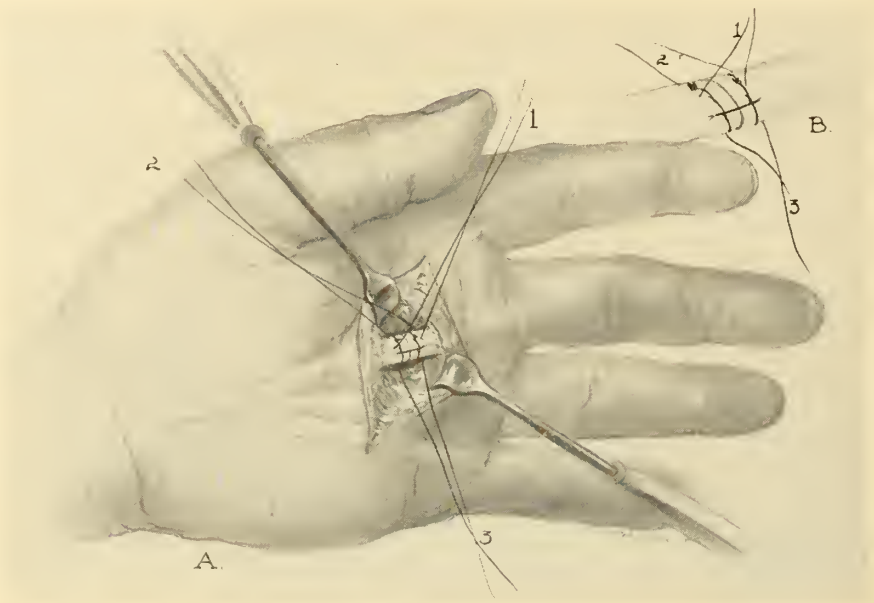


FIGURE II
Placement of the tension suture proximal to the encircling sutures.

Two different sutures are used, an encircling suture and the tension sutures.

In our method, the encircling suture passes around the tendon a short distance from its lacerated end in a series of inside loops. The depth of these loops is in proportion to the size of the tendon but should not be deeper than one-eighth the diameter which will permit the approximation of well over 56 per cent of the cut surfaces of the tendon not subjected to constriction. The suture should be at a right angle to the long axis of the tendon so that it will not tend to loosen under strain. It should be moderately taut as it encircles but should not constrict the tendon to the point of forming a marked indentation.

The encircling sutures should be placed with the loops on the inside. This is done by passing the needle into the tendon in the direction which is opposite to the progress of the suture. If the needle is inserted into the tendon in the same direction in which the suture is prog-

ressing the loops will be on the outside and the normal contour of the tendon will not be maintained under the tension of the approximating sutures.

This suture serves two purposes: it binds the fibers at the cut ends together so as to form reasonably firm structures for approximation, and it acts as a stabilizer for the tension sutures.

The suture material is as fine as the estimated tension involved will permit. For example, for extensor tendons of the finger or for flexor tendons within the digital sheaths, arterial silk is ample if its tensile strength is correct. Larger tendons at the wrist may require No. C silk. The tensile strength should be tested just prior to use.

The tension sutures pass through the diameter of the tendon just proximal to the encircling sutures. They are two or three in number depending upon the size of the tendon and are placed equidistant from each other. When these are tied with proper tension the cut ends of the tendon are accurately approximated.

All sutures should be tied three times firmly.

When the encircling and approximating sutures are properly placed, the former stabilize the latter by grasping the fibers at the periphery of the tendon, with the loops on either side of the point where the sutures intersect. This grasping or constricting action is transmitted to a lesser degree to the loops on each side.

A splint or cast is applied for three or four days, or during the period in which bacterial incubation would be accelerated by motion. Then, if the wound is clean the splints are removed, except at night, and motion started. Motion should be increased daily, first passively, then actively, to a point just under the pain level. Splints are applied at night for three weeks to avoid involuntary strain on the suture lines. Moderate normal activity is permitted after three weeks but excessive strain should be avoided for several months following repair.

SUMMARY

The factors to be considered in the repair of severed tendons are briefly discussed and a method for suturing such tendons which meets all the requirements for a satisfactory result and avoids some of the disadvantages inherent in the commonly accepted procedures, is described.

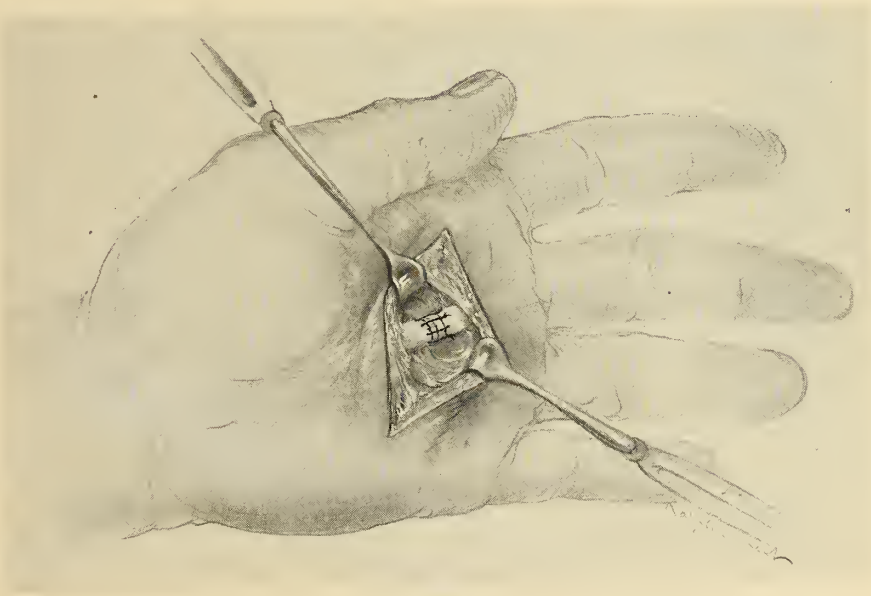


FIGURE III.
Completed operation. Note absence of widening of the tendon at the line of suture.

These sutures are of heavier material than that of the encircling sutures, but the finest material consistent with the strain to be put upon it should be used. Here again the size is proportionate to the size of the tendon and the strength of the muscle and varies from No. C to No. 2 silk. Again it is important to test the suture for tensile strength before using it.

REFERENCE

Bove, C. Suturing of Flexor Tendons of Hand (Transfixion). M. Rec. 153: 94 (Feb. 5) '41.

DIGEST OF THE WAGNER BILL

THE Wagner Bill, S1161, has been introduced in the U. S. Senate and has been referred to the Senate Committee on Finance. Following is an analysis of the measure prepared by The Bureau of Legal Medicine and Legislation of the A.M.A. It was published in the June 26, 1943 issue of the Journal of A.M.A., the August issue of the Ohio State Medical Journal, and various other medical publications throughout the country. It should be read by every doctor, and every nurse, and the owner of every private hospital throughout the United States. Hearings on the bill before the above Committee may be started at anytime.

Referred to generally as embodying an Americanized Beveridge plan but offered in Congress, according to Senator Wagner, "simply as a basis for legislative study and consideration," legislation was introduced, June 3, in the Senate by Senator Wagner, New York, for himself and Senator Murray, Montana, and in the House by Representative Dingell, Michigan, proposing to create a Unified National Social Insurance System (S. 1161; H. R. 2861). The Senate bill is pending in the Senate Committee on Finance and the House bill in the House Committee of Ways and Means.

The system proposed to be created will be financed in general from a trust fund established by a 6 per cent employee and a 6 per cent employer contribution on all wages and salaries, up to the first $3,000 a year, paid or received after December 31, 1943. Included in this proposed system will be a system of public employment offices, increased old age and survivors' insurance benefits, temporary and permanent disability insurance benefits, protection to individuals in the military service, increased unemployment insurance benefits under a federalized unemployment system, maternity benefits, medical and hospitalization insurance benefits, a broadening of the basis of the existing social security program to embrace some 15,000,000 persons now excluded, such a farm workers and domestic servants, employees of nonprofit institutions, independent farmers, members of the professions and other self-employed individuals, and a unified public assistance program. There follows an analysis of those provisions of the ninety page bill that appear to be of particular concern to medicine.

DISABILITY BENEFITS PLUS MEDICAL CARE

The bill broadens the existing social security coverage by providing for the payment of cash permanent disability benefits to beneficiaries. In addition to such cash benefits, the Social Security Board, through the Surgeon General of the Public Health Service, will be authorized to make provision for furnishing medical, surgical, institutional, rehabilitation or other services to disabled individuals, entitled to receive insurance benefits, if such services will aid in enabling such individuals to return to gainful work. Such services, it is contemplated, will be furnished "by qualified practitioners and through governmental and nongovernmental hospitals and other institutions qualified to furnish such services." In administering the provisions of this particular section of the bill, the Surgeon General and the Social Security Board will follow as far as applicable the procedure outlined by another section of the bill relating to medical, hospitalization and related benefits generally.

MEDICAL HOSPITALIZATION AND RELATED BENEFITS IN GENERAL

Section 11 of the bill proposes to add a new title to the Social Security Act, title IX, providing for a federal system of compulsory medical and hospitalization insurance for all persons covered under the old age and survivors' insurance, and their dependents. Each insured worker and his dependent wife and children will be entitled to receive general medical, special medical, laboratory and hospitalization benefits. In addition, the system is made elastic so that it may be enlarged in its coverage to admit other beneficiaries on a voluntary basis, such as self-employed individuals and employees of state and political subdivisions.

In order to appreciate the broad scope of this new title, consideration must initially be given to the meaning of the words and phrases used in it. The term "general medical benefit" means services furnished by a legally qualified physician, including all necessary services such as can be furnished by a physician engaged in the general practice of medicine, at the office, home, hospital or elsewhere, including preventive, diagnostic and therapeutic treatment and care, and periodic physical examinations.

The term "special medical benefit" means necessary services requiring special skill or experience, furnished at the office, home, hospital or elsewhere by a legally qualified physician who is a specialist with respect to the class of service furnished.

The term "laboratory benefit" means such necessary laboratory or related services, supplies or commodities, not provided to a hospitalized patient and not included as a part of the general or special medical benefit, as the Surgeon General of the United States Public Health Service may determine, including chemical, bacteriologic pathologic diagnostic and

therapeutic X-ray and related laboratory services, physical therapy, special appliances prescribed by a physician, and eye glasses prescribed by a physician "or other legally qualified practitioner."

The term "hospitalization benefit" means (1) not less than $3 and not more than $6 for each day of hospitalization, not in excess of thirty days, which an individual has had in a period of hospitalization: (2) not less than $1.50 and not more than $4 for each day of hospitalization in excess of thirty in a period of hospitalization; and (3) not less than $1.50 and not more than $3 for each day of care in an institution for the care of persons suffering from chronic ailments. The exact amount of the benefit between the minimums and maximums stated, will be fixed by the Surgeon General of the Public Health Service after consultation with the National Advisory Medical and Hospital Council to be created by the bill and after approval by the Social Security Board. In lieu of such compensation, the Surgeon General may, after approval of the Social Security Board, enter into contracts with participating hospitals for the payment of the reasonable cost of hospital service, at rates for each day of hospitalization neither less than the minimum nor more than the maximum applicable rates previously mentioned. Such payments will constitute full reimbursement, the bill provides, for the cost of essential hospital services, including the use of ward or "other least expensive facilities compatible with the proper care of the patient."

PANEL OF PHYSICIANS TO SUPPLY MEDICAL CARE

The Surgeon General will be required to publish and otherwise make known in each area to individuals entitled to benefits the names of general practitioners who have signified their willingness or desire to participate in the insurance program. Any legally qualified physician may so participate. A beneficiary may select any physician appearing on the panel to treat him subject to the consent of the physician selected, and may change such selection in accordance with such rules and regulations as may be prescribed. The Surgeon General may set maximum limits to the number of potential beneficiaries for whom a general practitioner may undertake to furnish medical benefits. Such limits may be nationally uniform or may be adapted to take account of "relevant factors."

The services of specialists will ordinarily be available only on the advice of the general practitioner. The Surgeon General will determine what constitutes specialist services and will also determine the qualifications of physicians as specialists "in accordance with general standards previously prescribed by him after consultation with the council and utilizing standards and certifications developed by competent professional agencies."

PAYMENTS FOR THE SERVICES OF PHYSICIANS

Payments to general practitioners may be made (1) on the basis of fees for services rendered, according to a fee schedule approved by the Surgeon General; or (2) on a per capita basis, the amount being according to the number of individuals entitled to benefits who are on the practitioner's list: or (3) on a salary basis, whole or part time; or (4) on a combination or modification of these bases. The method of payment, subject to the approval of the Surgeon General, will apparently be determined in each area in accordance with the desires of a majority of the general practitioners collaborating with the insurance program.

Payments to designated specialists may include payments on salary (whole time or part time), "per session," fee for service, per capita, or other basis, or combinations thereof. Apparently the method of payment to be adopted for specialists will be determined by the Surgeon General.

Payments for medical services may be nationally uniform or may be adapted to take account of "relevant factors." In any area where payment for the services of a general practitioner is on a per capita basis, the bill provides that the Surgeon General shall distribute on a pro rata basis among the practitioners of the area on the panel those individuals in the area who, after due notice, have failed to select a general practitioner or who, having made a selection, have been refused by the practitioner.

The bill provides that in each area the provision of general medical benefit for all individuals entitled to receive such benefit "shall be a collective responsibility of all qualified general practitioners in the area who have undertaken to furnish such benefit."

LIMITATIONS ON GENERAL MEDICAL AND LABORATORY BENEFIT

The Surgeon General and the Social Security Board may determine for any calendar year or part thereof that every individual entitled to general medical benefit may be required by the physician attending him to pay a fee with respect to the first service or with respect to each service in a "spell of sickness" or course of treatment if it is believed that such a determination is necessary and desirable to prevent or reduce abuses of entitlement ot such benefits. Maximum size of such fee may be fixed by the Surgeon General and the Social Security Board at an amount estimated to be sufficient to prevent or reduce abuses and not such as to impose a substantial financial restraint against proper and needed receipt of medical benefit. Likewise the Surgeon General and the Social Security Board may limit the application of such fees to home calls, office visits or both.

PARTICIPATING HOSPITALS

For a hospital to participate in this insurance program, it must have been approved by the Surgeon General under standards prescribed by him after consultation with the council. A hospital to be approved must provide all necessary and customary hospital services and must be found to afford professional services, personnel and equipment adequate to promote the health and safety of individuals customarily hospitalized in such institution. The Surgeon General may approve or accredit a hospital for limited varieties of cases and may accredit an institution for the care of the "chronic sick." In determining the adequacy of the professional services, personnel and equipment of any such institution, the Surgeon General may take into account the purpose of such limited accrediting, the type and size of community which the institution serves, the availability of other hospital facilities, and such other matters as he may deem relevant.

APPLICATION FOR AND LIMITATION OF HOSPITALIZATION BENEFITS

No application by an individual for hospitalization benefits will be valid with respect to any day of hospitalization if the application is filed more than ninety days after such day, or with respect to any day of hospitalization for mental or nervous disease or for tuberculosis after such diagnosis has been made. The maximum number of days in any benefit year for which any individual may be entitled to hospitalization benefit will be thirty. If, however, the funds in the special hospitalization benefit account fund to be created prove adequate, the maximum number of days may be increased to ninety by the Surgeon General and the Social Security Board, acting jointly.

PROPOSED METHOD OF ADMINISTRATION

The Surgeon General of the Public Health Service will be authorized to take all necessary and practical steps to arrange for the availability of the medical hospitalization and related benefits. He will be authorized to negotiate and periodically to renegotiate agreements or cooperative working arrangements with appropriate agencies of the United States, or of any state or political subdivision thereof, and with other appropriate public agencies, and with private agencies or institutions, and with private persons or groups of persons, to utilize their services and facilities and to pay fair, reasonable and equitable compensation therefor.

The methods of administration, including the methods of payment to practitioners, the bill provides, shall (1) insure the prompt and efficient care of individuals entitled to benefits; (2) promote personal relationships between physician and patient; (3) provide professional and financial incentives for the professional advancement of practitioners, and encourage high standards in the quality of services furnished as benefits through the adequacy of payments to practitioners, assistance in their use of opportunities for postgraduate study, coordination among the services furnished by general practitioners, specialists, laboratory and other auxiliary services, coordination among the services furnished by practitioners, hospitals, health centers, educational, research and other institutions, and between preventive and curative services, and otherwise; (4) aid in the prevention of disease, disability and premature death, and (5) insure the provision of adequate service with the greatest economy consistent with high standards of quality.

NATIONAL ADVISORY MEDICAL AND HOSPITAL COUNCIL

The bill proposes the creation of a National Advisory Medical and Hospital Council, to consist of the Surgeon General of the United States Public Health Service as chairman and sixteen members appointed by him. The appointed members will be selected from panels of names submitted by the professional and other agencies and organizations concerned with medical services and education and with the operation of hospitals and from among other persons, agencies or organizations informed on the need for or provision of medical, hospital or related services and benefits. Appointed members will hold office for four years, with the terms of office staggered. The appointed members will receive compensation at the rate of $25 a day for time spent on official business of the council, and actual and necessary traveling expenses and per diem in lieu of subsistence.

This council will "advise" the Surgeon General as to (1) professional standards of quality to apply to general and special medical benefits; (2) designation of specialists; (3) methods and arrangements to stimulate and encourage the attainment of high standards through coordination of the services of general practitioners, specialists, laboratories and other auxiliary services, and through the coordination of the services of practitioners with those of educational and research institutions hospitals and health centers, and through other useful means; (4) standards to apply to participating hospitals and to establishment and maintenance of the list of participating hospitals; (5) adequate and suitable methods and arrangements of paying for medical and hospital services; (6) studies and surveys of the services furnished by practitioners and hospitals and of the quality and adequacy of such services; (7) grants-in-aid for professional education and research projects, and (8) establishment of special advisory, technical, local or regional boards, committees, or commissions.

RELATION TO WORKMEN'S COMPENSATION ACTS

The benefits provided by this bill will not be

available with respect to an injury, disease or disability coming within the purview of any state or federal workmen's compensation act.

The bill devolves on the Surgeon General and the Social Security Board jointly the duty of ascertaining the most effective methods of providing dental, nursing and other needed benefits not contained in the pending bill and of determining the expected costs of such additional benefits. The bill contemplates that the Surgeon General and the Social Security Board will report the results of their findings, with recommendations as to legislation, not later than January 1, 1946.

GRANTS - IN - AID FOR MEDICAL EDUCATION, RESEARCH AND PREVENTION OF DISEASE AND DISABILITY

The Surgeon General will be authorized to administer grants-in-aid to nonprofit institutions and agencies engaging in research or in undergraduate or postgraduate professional education. The purpose of these grants will be to encourage and aid the advancement and dissemination of knowledge and skill in providing benefits and in preventing illness, disability and premature death. Such grants-in-aid will be made with respect to each project (1) for which application has been received from a nonprofit institution or agency, stating the nature of the project and giving the reasons for the need of financial assistance in carrying it out, and (2) for which the Surgeon General finds, with the advice of the council, that the project shows promise of making valuable contributions to the education or training of persons useful to or needed in the furnishing of medical, hospital, disability, rehabilitation and related benefits or to human knowledge with respect to the cause, prevention, mitigation or methods of diagnosis and treatment of disease and disability.

This part of the program will be financed by setting aside a certain percentage of amounts expended for benefits from the Federal Social Insurance Trust Fund to be created by the bill. The amount to be set aside will equal 1 per cent of the total amount expended for benefits from the trust fund, exclusive of unemployment insurance benefits, or 2 per cent of the amount expended for benefits under title IX (relating to federal medical, hospitalization and related benefits), after benefits under that title have been payable for not less than twelve months, whichever is the lesser, in the last preceding fiscal year. The bill apparently leaves all the details with respect to these grants-in-aid to regulations to be promulgated by the Surgeon General after consultation with the council.

SELF-EMPLOYED INDIVIDUALS

Self-employed individuals many receive the benefits of the old age, survivors, and permanent disability and medical and hospital insurance by paying into the Trust Fund an amount equal to 7 per cent of the market value of their services rendered as self-employed individuals, after December 31, 1943, with respect to services in self employment after that date, but not including that part of any remuneration for employment and the market value of services in self employment in excess of $3,000 for any calendar year.

EMPLOYEES OF STATES AND LOCAL SUBDIVISIONS

The bill authorizes the Social Security Board ot enter into compacts with individual states or with political subdivisions for the purpose of extending old age, survivors, and permanent disability and medical and hospitalization insurance coverage to employees of such states or political subdivisions To finance the benefits to be provided under such compacts, the bill requires such employer to pay a social security contribution equal to 3.5 per cent of the wages paid by it after December 31, 1943, and every individual beneficiary of such a compact a contribution equal to 3.5 per cent of the wages received by him after December 31, 1943, excluding any amount paid or received in excess of $3,000 during any calendar year after December 31, 1943. (End of Digest)

COMMENT

The purpose of this bill is to extend the Social Security Law to include Medical and Hospital Services. The proponents claim that it is merely a means of bringing adequate medical care to the lower income groups. The bill has been framed without an iota of advise from a single medical man. There are seven Doctors of Medicine in this Congress of the United States, not one of whom was consulted. It requires but scant study to see that its ramifications are without limit and if passed, the best and most efficient system of medicine in any country on the face of the earth today, would be wiped out in one single stroke. A system which began with the modern era of medicine and evolved through free enterprise, and for the most part, unselfish competition, and founded on the traditional physician-patient relationship, a relationship which cannot exist under such proposal legislation. The Medical profession has been called upon many times in the past for an expression on legislative measures. But all measures in the past, added all together, are mere chicken feed compared to this one. This is a $3,000,000,000 a year kitty to administer the medical care of the entire country, and to be administered by a single man, the Surgeon General. Gentlemen, this is the Jack-pot.

THE USE OF DICUMAROL IN THE PREVENTION OF POST-OPERATIVE PULMONARY EMBOLISM

ROBERT S. FLINN
Phoenix, Arizona

DICUMAROL, an extract of spoiled sweet clover, was first isolated and later synthesized by Professor Link of the University of Wisconsin. This substance has been shown to increase the prothrombin time definitely when given to human beings. There is good experimental evidence to indicate that the prolongation of the prothrombin time will inhibit intravascular thrombosis. Bollman, Dale and others have shown that dicumarol decreases the tendency to thrombosis in veins and arteries in experimental animals. The effect is apparently the result of suppression of the formation of the prothrombin. Secondary effects are interference with normal clot retraction and increased sedimentation rate.

Barker, Allen and Waugh recommend an initial single dose of 300 milligrams for the first day and 200 milligrams the second day. On the third day, daily determinations of the prothrombin time are begun and 200 milligrams of dicumarol are given on each day that the prothrombin time is less than 35 seconds. The prothrombin time should be kept between 35 to 60 seconds. When dicumarol is discontinued the prothrombin time remains elevated from three to seven days and gradually turns to normal. However, the effects of the dicumarol can be quickly abolished by the use of a transfusion with freshly drawn blood.

In cases of postoperative pulmonary embolism or postoperative thrombophlebitis the administration of dicumarol is begun as soon as the diagnosis is made. As a prophylaxis against thrombosis in postoperative patients dicumarol is given the day following operation and the prothrombin time is kept elevated for ten days or more until the patient is up and about.

INDICATIONS

Individuals who have had one attack of pulmonary embolism after an operation or those who have had postoperative thrombophlebitis should be treated with dicumarol, since the statistical study of Nygaard, Walters and Priestly have shown that these patients are especially vulnerable and may develop a fatal pulmonary embolism.

Individuals who have had thrombophlebitis or pulmonary embolism six months prior to operation may also be considered candidates for postoperative pulmonary complications and should be treated with dicumarol.

CONTRAINDICATIONS

Dicumarol should not be used for patients who are bleeding. This is particularly true in subacute bacterial endocarditis, renal insufficiency, and purpura of any type. Hepatic disease, jaundice and malnutrition are also contraindications.

REPORT OF A CASE

On March 27th, 1943 a 50 year old obese individual with mild myocardial disability and prostatic obstruction was admitted to St. Joseph's Hospital with urinary retention. Because of an indwelling catheter his movements were markedly restricted and he developed a phlebothrombosis of the right leg and suffered two moderately severe attacks of pulmonary embolism, with shock, dyspnea, pallor, low blood pressure and characteristic electrocardiographic findings. With the aid of atropine and papaverine intravenously the patient survived these attacks.

Because statistical studies indicate that a patient who has had even a mild attack of pulmonary embolism has a slightly less than 1 chance in 5 of having a subsequent fatal pulmonary embolism, it was decided to treat this patient with dicumarol. Through the courtesy of the Abbott Laboratories a supply of dicumarol was obtained and the patient was given 300 milligrams one day prior to operation and thereafter received 200 milligrams daily until the eighth postoperative day. Daily prothrombin levels varied from 35 to 45 seconds. The prothrombin time returned to normal eight days following discontinuance of the drug. A transurethral resection was performed by Dr.

(Balance of Paper and Summary Continued on Page 24)

Read before the staff of St. Joseph's Hospital, Phoenix, Arizona, October 15th, 1943.

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Editorials

The Birth of Arizona Medicine

With this issue *Arizona Medicine*, as official publication of the Arizona Medical Association, makes its debut among the medical journals of the other states of the nation. When the governors of Southwestern Medicine found it necessary to discontinue the publication of Southwestern Medicine for the duration, the Council of the State Society took the opportunity to publish a journal devoted entirely to the State of Arizona. While we regret deeply the loss of our many friends in New Mexico and El Paso, nevertheless the members of the State Medical Profession have long felt the need and necessity of its own journal. Arizona Medicine will be published bi-monthly. An attempt will be made to reach all the physicians of the State who are in the armed forces. The curtailment of the Scientific Meetings of the State Society will hamper to some degree, the securing of material for the pages of the journal. A letter has been written to as many of the members in the armed forces as we had addresses for, asking them for either a personal letter, or an account of their medical experiences to whatever extent they would be permitted to reveal them. As this first issue goes to press we have had little response so far. The problems of medical care have become such a major subject of discussion that there is scarcely an election, or a meeting of the National Congress, or the State Legislatures, that new medical legislation is proposed. It will be the policy of the Editorial Staff to keep the members of the State Society as fully informed as possible on the advent, and progress of such legislations. The comments and criticisms of the members of the State Society will be welcomed.

Whither—Organized Medicine

It is an honor and a pleasure to contribute an editorial for this, the first issue of *Arizona Medicine*. The Editor, in extending his kind invitation for the contribution, left open the choice of subject. Being mindful of the increasing attempts to overthrow the practice and service of medicine as it has always been understood and heartily accepted, and being mindful of the pernicious ramifications of such current mal-legislation as the Wagner Bill (Senate 1161), I know of nothing better that I can say than to sound a warning on "Whither—organized medicine."

It so happens that my presidential address, when I was inducted into that high office of our association in 1940, covered the subject with what I said then as appropriate today, if not more so, than when presented then. I, therefore, repeat brief sections of that article for editorial thought here:

SOUNDING OFF

There are those sitting in high places who are sounding a discordant note against organized medicine. This discordant note has to do with medical service rather than with medical practice—and medical service at a price, the price being restriction and regimentation. Sounding this sour note are the economist and the sociologist who have arrived on the American scene and in the medical field. They are implemented by propagandists. By their activities they have diminished, and in some instances almost destroyed the faith of the public in the medical leadership which accomplished so much for the public welfare before the arrival of the expert economist and the expert sociologist. Their fascinating theories, couched in cleverly formed phrases and uttered in well-cultivated voices make a stronger appeal, in many instances, than the calm, logical voice of experienced medicine.

THE ECONOMIST PROPOSES

The economist forgets, or ignores, that the man of medicine is not trained to work for

money. The medical student is taught from the outset that he is not to work for money or to work for fame, but to search for knowledge and to seek to relieve the suffering of mankind. If the economist has his way and continues to seek a service at a price, he will soon find himself in the position of the family employing a Chinese cook. In employing this Chinese cook the question of salary arose. "What do you charge for your cooking, Ying?" asked the lady of the house. "What kind of cooking you wantee?" countered Ying. "Me do $20 cooking, or me do $10 cooking." The physician, if permitted to continue with his private practice, will give his patients, as always, good, substantial $20 cooking, but if hired to serve medicine at a price is very apt to lag into indifferent $10 cooking. If profit is to be removed from medicine, physicians will at best become draft animals. If the question of gain is to be removed from medicine and the general public taxed so that those not having medical care may have it, then why not sell automobiles at cost and levy a tax on the public so that those not able to buy automobiles even at cost may have them free. One proposition is as reasonable as the other in the final analysis.

A socialized medicine is being proposed in place of an organized medicine. Organized medicine has its roots in democracy, for "Wherever the art of medicine is found, there also is found a love for humanity." Socialized medicine does not have its roots in the democratic principles which have made this country great, for it would destroy individual initiative. It is true that government must assume its rightful responsibility for the care of those on welfare rolls, but there must be a limit beyond which government must not step without usurping personal responsibility. Government's first problem in medical service is to provide adequate care for those on relief; its second consideration is to permit the medical profession and organization to till its own field. "Medical problems can best be solved by medical practitioners, not by ambitious, if well informed, politicians who never circumcised a young man nor catherized an old one." Our changing medical service can and must be changed only by the physician himself, through his medical society, and not through regimentation. The medical practitioner must be free from bureaucratic control in order that he may go his untrammeled way in adding his mite to the beneficient influence which our profession has always contributed to the upward progress of humanity.

ORGANIZED MEDICINE DISPOSES

If American medicine is to be saved from disaster, it must be through organized medicine, and the individual physician must be prepared to play his part or take the consequences. Propaganda can be met only by counter-propaganda. Half truths, illogical deductions, insidious innuendoes, and their like, can only be met by refutations and counter-activities that give the lie to them.

In this, our medical organization in Arizona, the responsibilities do not rest entirely with the officers of your association. *In the last analysis, the rank and file of the membership are the ones responsible.* They should make it their business to take an active constructive part in the affairs of the association, keep themselves thoroughly and fully informed on the social and political problems and be prepared to meet them intelligently.

If each individual physician will do his full part, both as a private practitioner of medicine and as a member of his professional guild, our case will rest pretty largely in the hands of our patients and ourselves and there will be little to fear as to the outcome. A great deal has been accomplished in recent years through our organizations, county, state and national, but a great deal more can and must be done if we are to hold our ground in this modern changing society. —*D. F. Harbridge, M. D.*

National Physicians Committee

While most every physician in the country has heard of the National Physicians Committee and many have received literature from this organization, not every one is familiar with the exact status of this organization and the work it is performing. This Committee was organized 4 years ago. Its chairman is Dr. Edward H. Cary of Dallas, Texas, a former president of the American Medical Association. The Board of Trustees consist of names of nationally known physicians from Coast to Coast. In brief, this Committee was organized to de-

termine what and when and where the private practice of medicine is failing to render the best medical care to the American public, and if possible to find the answer to these deficiencies. It is also the purpose of this Committee to carry on an Educational Campaign to the public, to acquaint them with the best way to derive efficient and proper medical care. In performing this latter service, they are conducting the equivalent of a Gallup Poll among the American public, the results of which will be available early in 1944. Another major function of this Committee is to combat National Legislation which is considered detrimental to the American system of private medical practice. So their greatest problem at this time is to assure defeat of the Murray-Wagner Bill before Congress. The following resolutions clarify the status of the National Physicians Committee with the American Medical Association.

On June 9th, in Atlantic City, the House of Delegates of the American Medical Association adopted a resolution of endorsement of the National Physicians Committee. The Resolution reads:

"BE IT RESOLVED; that we register our approval of the activities of the National Physicians Committee for the Extension of Medical Service, commend the Board of Trustees and the Management of this institution for the efforts they have made to enlighten the general public in connection with American Medicine's methods, progress and achievements and in pointing out that the public has a vital interest in the final result; and

"BE IT FURTHER RESOLVED that it be declared the policy of this House of Delegates to encourage this effort and similar efforts with identical purposes."

COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS ENDORSES

The annual meeting of the AMA House of Delegates—Chicago, June 7-10, 1943—by formal action established a Council on Medical Service and Public Relations. Subsequently the Council defined general policies. Clause 7 of A Statement of General Policies (of the Council) reads:

"There is no official affiliation between the American Medical Association and the National Physicians Committee. However, since it is the purpose of the National Physicians Committee to enlighten the public concerning contributions which American medicine has made and is making in behalf of the individual and the nation as a whole, *it is the opinion of the Council that the medical profession may well support the activities of the National Physicians Committee* and other organizations of like aims."

This Committee is financed by voluntary subscriptions from physicians throughout the country. During the past year of 1943, 6227 physicians have contributed, which included 25 from Arizona. In recognition of the work being done by the Committee, the Maricopa County Medical Society in executive session voted unanimously to levy a special assessment of $10 per member to be added to the regular 1944 dues, and the proceeds to be forwarded to the Treasurer of the organization. There are approximately 120 members of the Maricopa County Medical Society, not including those in Military Service.

Office of Civilian Defense

The following news item has been released by the office of Civilian Defense Ninth Civilian Region, San Francisco, California.

San Francisco—Dec. 9, 1943—The Office of Civilian Defense announced today that 40 out of the planned 50 "Affiliated Base Hospital Units and Surgical Teams" sponsored by hospitals and medical schools in California, Nevada, Arizona, Washington, Oregon, Utah, Idaho, and Montana have been completed. These "Units" are formed by civilian physicians and dentists and will be available to either OCD or the Army in the event of the necessity of emergency medical needs in their respective areas.

Each "Unit" is composed of 15 members or less, according to the availability of physicians, surgeons, and specialists in various localities. They will be called upon by the War Department only in the case of extraordinary military necessity requiring hospital and medical care beyond the immediate facilities of the Army in any particular locality.

OCD will use these Units and Surgical Teams to supplement the staffs of "Emergency Base Hospitals" located in relatively safe zones near critical areas should it become necessary to evacuate civilian patients from these critical areas.

Physicians accepted for service in the Units receive commissions in the Reserve of the U. S. Public Health Service but will not be called to active duty by the Surgeon General (USPHS) except at the request of OCD, through the respective State Chiefs of Emergency Medical Service. When a unit is needed, the physicians of the Unit will be placed on active duty only for the duration of a particular emergency in order to prevent further depletion of the civilian doctors.

The Affiliated Units in the Western area are divided as follows: California; Los Angeles, 8; Pasadena, 1; San Diego, 1; San Bernardino, 1; Ventura, 1; Santa Barbara, 1; San Francisco, 5; Oakland, 2; Santa Rosa, 1; San Jose, 1; Salinas, 1; Stockton, 1; Fresno, 1; Bakersfield, 1. Oregon: Portland, 4; Salem, 1; Eugene, 1. Washington: Seattle, 3; Spokane, 3; Tacoma, 2; Bellingham, 1; Everett, 1; Wenatchee, 2 teams; Yakima, 1 team. Idaho: Boise, 1. Montana: Great Falls, 1. Utah: Ogden, 1. Nevada: Reno, 1. Arizona: Phoenix, 1.

The Phoenix Unit has been organized at St. Joseph's Hospital consisting of fifteen members of the staff all of whom have been accepted and approved by the Regional Civilian Defense Office and have been recommended for Reserve Commissions to the U. S. Public Health Department, Washington, D. C.

The U. S. Office of Civilian Defense today announced that 93 hospitals and medical schools scattered throughout the country have completed formation of "affiliated units" of civilian physicians which will be available to either OCD or the Army in the event of need for setting up emergency hospital facilities in their respective areas.

Each unit is composed of 15 physicians, surgeons and other specialists, and forms a balanced professional staff. OCD will use the units to supplement the staffs of "emergency base hospitals" located in relatively safe zones on the fringes of critical areas in case it is necessary to transfer civilian patients to these hospitals because of emergency in such areas.

The units will be called upon by the War Department to staff extemporized hospitals should there be a sudden influx of battle front casualties, or some other extraordinary military necessity, requiring hospitals and physicians beyond the immediate capacity of the Army in any particular locality.

The OCD-affiliated units will be used for military emergency purposes only in or near the communities in which the staff resides. Their duty will be temporary and they will be replaced by Army doctors as quickly as the Surgeon General of the Army can make the necessary assignments.

Normally, all the 15 doctors of a unit are associated with a single hospital. Each unit includes: a chief and assistant chief of medical services, two general internists, a chief and assistant chief of surgical services, four general surgeons, two orthopedic surgeons, one dental surgeon, one pathologist, and one radiologist.

Physicians accepted for service in the units receive inactive reserve commissions in the U. S. Public Health Service, but will be called to active duty by the Surgeon General (USPHS) only at the request of OCD. When a unit is needed, either to staff an emergency base hospital or to assist the Army temporarily in a military emergency, the physicians of the unit will be placed on active duty for the duration of that particular emergency.

Organization of these units in selected communities will give both OCD and the Army organized emergency hospital staffs which can be called upon in time of need.

THE USE OF DICUMAROL IN THE PREVENTION OF POST-OPERATIVE PULMONARY EMBOLISM

(Continued from Page 20)

John W. Pennington and the patient's recovery was quite straightforward.

SUMMARY

Dicumarol is effective when given by mouth and is capable of prolonging the prothrombin time. There is adequate experimental and clinical evidence to indicate that it is effective in preventing postoperative thrombophlebitis and pulmonary embolism. It should not be given unless the protrombin time can be determined accurately daily. There is some slight risk in postoperative bleeding but this can be controlled by transfusions.

BIBLIOGRAPHY

Barker, N. W., Allen, E. V., and Waugh, J. M., proc. Staff meeting, Mayo Clinic, 18, 102-107, April 7, 1943.

Ibid J.A.M.A. 120:13, 1009-1015, Nov. 28, 1942.

Wright, I. S., and Prandoni, A., J.A.M.A. 120:13, 1015-1021, Nov. 28, 1942.

ORGANIZATION SECTION

CONFERENCE OF WESTERN MEDICAL ASSOCIATIONS

On December 11, the Western State Medical Associations convened at Salt Lake City, holding the conference at the Hotel Utah. A preliminary conference had been held at San Francisco on November 2 which was attended by our President, Dr. O. E. Utzinger. Dr. Utzinger was unable to get away for the second conference; so, as Chairman of the Committee on Public Policy and Legislation, the undersigned attended.

Action of the conference was based largely on an exhaustive report presented by Mr. Ben Read, Executive Secretary of the California Public Health League which is one of the legislative media for the California Medical Association. Mr. Read had been sent by the California Medical Association to Washington for a month to learn first hand advisable legislative procedures for the medical profession. Mr. Read returned from Washington on December 7, hence his report was based on latest findings and developments.

Business Before the Conference

Dr. Dwight H. Murray, Chairman of the Committee on Public Policy and Legislation of the California Medical Association, opened the meeting stating there were something like three important questions before this conference: there was the question of how to go about combatting or supporting legislation pending in the Halls of Congress; the question of what the American Medical Association could be counted on to do, and the question of whether the 11 western states desire to get together as a bloc in order to secure the 'ear' of Congress. Dr. Murray stated that Mr. Ben Read had been sent by the California Medical Association for a month's investigation at Washington and that he was charged with securing answers to three specific questions: 1. What does the Congress think of doctors of medicine? 2. What does the Congress think of the American Medical Association as an organization? and, 3. should a Medical Information Bureau be established at Washington?

Washington Attitude

Mr. Read then took the floor and for two full hours addressed the conference on his findings at Washington. In Washington, Mr. Read held extensive interviews with the 7 physicians who are members of the Congress, with leading members of the Senate and House. He also held conferences with heads of the Bureaus of Information of the American Dental Association, the National Retail Druggists Association, the American Hospital Association, with the Osteopaths and Chiropractors and numerous other individuals, boards and agencies set-up for legislative purposes.

The Wagner Bill

Before going into the replies he had ready on the three specific questions he had been charged to find answers for, Mr. Read stated that the Wagner Bill, in which all held a deep interest, had little chance of coming out for vote this spring but that there was much agitation for it. He stated further that the SOCIAL SECURITY ACT WILL BE ENLARGED THROUGH VARIOUS SCHEMES UNDER THE NAME OF *WELFARE* AND THAT FUNDS WILL BE PROVIDED FOR FURTHER ENCROACHMENT ON THE PRIVATE PRACTICE OF MEDICINE. Mr. Read emphasized that all activity for or against any measure must be made while that bill is in committee for once it hits the floor of Congress there is little to be done to secure revision or amendment.

What Does the Congress Think of Doctors of Medicine?

From his interviews Mr. Read stated that the Congress, and the various other individuals and organizations he interviewed, were fully sympathetic with the position of the individual physician and that the doctor, as such, could be heard in the Congress.

What Does the Congress Think of the AMA?

Mr. Read reported that from all his interviews at Washington he must report that the attitudes toward some representatives of the AMA were not sympathetic and not cordial. The AMA has no information bureau at Wash-

ington; it opposes all legislation yet offers nothing but criticism in return.

Should a Medical Information Bureau be Established in Washington?

The reply to the question of establishing a Medical Information Bureau at Washington was unanimously 'yes'. From all sides, and from congressmen in particular, came the complaint that they had no source to which they could go for information needed in regard to health legislation. The Executive Secretary of the Medical Society of the District of Columbia stated that because their Society was located there in the city of Washington they were swamped with questions pertaining to legislation on which they did not have, and could not have, information—such questions were: How many indigent children were there in Arkansas last year; How much is California spending for Social Security? One congressman stated there must be such a Bureau established to answer the 1,000 and 1 questions arising daily in connection with health legislation. The American Dental Association and the American Hospital Association have long maintained such bureaus at Washington where information relating to their professions may be had for the asking. The Medical profession has never been so represented in Washington. Mr. Read brought back with him a Telephone Directory of the city of Washington and thumbed through the pages of Bureaus of Information listed therein.

The Wagner Bill Again

Mr. Read learned that the American Dental Association was opposed to the Wagner Bill and believes that their organization and the medical organizations should get together on health legislation. Much opposition was found against the bill from the various individuals interviewed. The osteopaths are also opposed to the bill and it was the suggestion of one congressman that the medical profession secure the support of the osteopaths in as much legislation as possible as the osteopaths have considerable strength especially in the Senate. The only organization found in support of the Wagner Bill was the CIO.

A War Service Bureau

It was recommended to Mr. Read that he bring back the suggestion to his group that the American Medical Association immediately establish a War Service Bureau at Washington as there will be at least 100,000 new war patients in government hospitals before the close of this year and that the Congress must have an immediate source at Washington where they may have the first-hand information for needs arising for such hospitalization purposes.

Action of the Conference

When Mr. Read concluded his address, (and I should state here that all his interviews at Washington were by way of dictograph records and that he read the verbatim comments of those whom he interviewed as well as his own remarks and questions frequently throughout his report), Dr. Murray took the floor and brought the business of the conference to a head by means of four motions:

*1. To poll the states at this meeting for a vote as to advisability of forming a bloc of the 11 Western States for the purposes of sponsoring a Medical Information Bureau at Washington.
2. Authorized appointment of a committee to draw up Resolutions as to the purposes and aims of this group.
3. That a Committee draw up the framework for a permanent organization of this group.
4. That officers for this Conference Committee be named, Dr. Dwight H. Murray being named the permanent chairman.

After a 30 minute recess, the Resolutions Committee presented their report which was adopted. It was voted that copies of these Resolutions be sent to: the Secretaries of the 11 Western States for the consideration of their Councils; to the secretaries of all state medical associations; to the American Medical Association and to the National Physicians Committee. It was also voted that a condensed report from Mr. Ben Read, together with the Minutes of this Conference should also be mailed the same organizations.

Before closing this report I should state that Mr. Read reported that those he interviewed were critical of the National Physicians' Committee, stating that the publicity sponsored by this Committee had been effective against the Wagner Bill but questionable in some other instances. The National Physicians' Committee can not be expected to aid in legislative matters

as their function is that of education and that under their present set-up they are not in position to get the legislative job done at Washington. It was suggested by a former member of the Board of that Committee, who was in attendance at the Salt Lake Conference as a representative from his state society, that the NPC might tie up with the medical profession in setting up a Medical Informaion Bureau at Washington.

Conclusions

Dr. Murray concluded the conference by expressing appreciation for the keen interest of the western associations. He said that the conference had now acted by endorsing some Resolutions of prime importance but that the Conference would now have to await the action of the Councils of the 11 Western Medical Associations before it could proceed with its further business.

Council of Arizona Medical Association

As soon as the Resolutions are officially received, which will be in the immediate future, President Utzinger will convene the Council of the Arizona Medical Association and secure immediate action on the matters presented. This may even be before this Journal goes to press, in which case a 'Flash Report' will be found elsewhere in these pages. In any event all county medical societies, and the membership, will be informed as soon as our Council receives and acts upon the recommendations of the Conference herein reported.

Signed,

Jesse D. Hamer, M. D., Chairman,
Committee on Public Policy and
Legislation.

*The poll found the Conference unanimous in favor of establishing such a Bureau and Resolutions were adopted accordingly and will be submitted each Council for its vote.

NOTE: A second conference at Salt Lake is set for January 29, our Council to take formal action thereafter.

ANNUAL CONFERENCE OF SECRETARIES AND EDITORS OF CONSTITUENT STATE MEDICAL ASSOCIATIONS

The Annual Conference of Secretaries and Editors of Constituent State Medical Associations was held at the AMA Headquarters in Chicago, November 19-20. Before this notice appears in Arizona Medicine, the entire proceedings will probably have been published in the Journal of the American Medical Association. While the entire discussion of the meeting should be of interest to everyone, because every subject discussed affects the present and future status of every medical man in this country, you are particularly urged to read and study the work of the Council on Medical Service and Public Relations, whose chairman is Dr. Louis H. Bauer; and the subject of medical legislation in Congress as presented by J. W. Holloway, Jr., Director of the Bureau of Legal Medicine and Legislation of the American Medical Association.

The trend of the times was evidenced by the fact that at the Meeting last year about 80 per cent of the discussion was devoted to the military needs of the armed forces and to the Procurement and Assignment of Physicians, and the balance to proposed legislation and civilian needs; the reverse was true this year. Practically the entire meeting was devoted to post-war thinking and proposed legislation in Congress.

To summarize briefly: The Directors of the Procurement and Assignment bestowed the highest praise on the various state chairmen of this service.

The Armed Forces placed their original requirement at 62,000 medical officers. This has been reduced to 48,000—at the present time there are about 41,000—so that 7 thousand more are needed. At the present time it so happens that the military authorities are discharging about as many doctors, due to physicial unfitness and inability to withstand army routine, as they are inducting. But they still hope to reach the revised program of 48,000.

An item of interest here is that the military decided to give women physicians commissions, hoping to enlist between 500 and 600. So far 38 have volunteered.

I am urging everyone to read the article presented by Dr. Louis H. Bauer, Chairman of the Council on Medical Service and Public Relations. This Council was created at the Meeting of the House of Delegates in June of this year. It has just secured the services of a permanent secretary, Dr. Kelly, former Dean of Medicine, University of Georgia. It is the intended and proposed function of this Council to bring all information concerning medical legislation in the National Capitol, progress on all economic problems confronting the medical pro-

fession, and the results and successes of the various Voluntary Health Insurance plans in operation, to the constituent medical societies throughout the nation. If success is to be attained in defeating national legislation unfavorable to good medical service, and the private practice of medicine, an intensive educational program for the public must be carried on, and the county medical society is the bureau through which the public is to be reached. The opponents of medicine have been selling the public the information that something is wrong with the system. This must be corrected. As things now stand, the public is not aware of what the American Medical Association stands for.

The discussion on the Obstetric and Pediatric care for the Wives and Children of Servicemen was the most spirited and exciting of the Conference. Don't miss any of it.

Much thought has been given in the past year to the rehabilitation of the possible number of 40,000 physicians to be demobilized when the war ends. Of these, it is estimated that 20,000 or ½ have never been established in privated practice. These are the ones who need planning for.

Respectfully submitted,
Frank J. Milloy, Secretary

ATTENTION, ALL PHYSICIANS

The War Man Power Commission issued a new Employment Program which became effective the morning of October 16, 1943.

Section 7, paragraph (4a) states, "When an applicant for a statement of availability alleges that his migration is necessary because of the health of himself or immediate members of his family, he shall obtain from a competent medical authority showing the following:

(a) The physical or pathological condition requiring migration from the job area.

(b) Altitude, climatic or other conditions required for patient, and

(c) The number and extent of examinations, observations or consultations upon which certification is made."

"The granting of a statement of availability based on such a medical statement is subject to appeal and the doctor's statement shall not be deemed conclusive of the necessity for such migration. Conflicting opinions may, if requested, be referred for determination of the dispute to an appropriate medical officer of the U. S. Public Health Service."

With the government asking for more and more essential war production, there has been an increasing migration of workers from the mines of Arizona to other defense projects. Many of these workers have left their employment armed with a certificate from a physician stating that they or a member of their family would enjoy improved health in another locality. One physician reported that in one day he refused certificates to three workers and later found all of them had obtained jobs in other states, due to the fact that they had certificates from other physicians. This is a very serious situation and we ask that all doctors give the most careful consideration to ease request for a transfer, making sure that conditions of health are the real reason for the request, rather than that the one making such request is trying to use the profession as a means of obtaining more lucrative employment elsewhere. Already cases are being reviewed by the Public Health Service. Let us do all we can to aid to the utmost the fullest production of essential war materials in Arizona. O. E. Utzinger

SALT RIVER VALLEY BLOOD BANK

Before the Pearl Harbor disaster, there were few physicians and even fewer civilians who realized the meaning of a blood bank. It takes the urgent necessity of a major catastrophe to point the way to new methods of treatment and valuable aids in the handling of emergencies.

The importance of transfusions in the treatment of many diseases has been recognized for many years and has been in general use following the discoveries of the so-called A and B substances in the blood by Lansteiner in 1900, of simple methods of typing by Jansky in 1907 and Moss in 1910, and of the use of citrate for the prevention of blood clotting by Huestin in 1914.

But in spite of the fact that the value of plasma was recognized for the treatment of shock in 1918 by Ward, its general use for this purpose did not come into prominence until the beginning of the present world war. It is now well established that plasma is essential for the treatment of surgical shock from burns and other causes and, in an emergency, can

temporarily take the place of whole blood in replacing blood lost from hemorrhage. It has the great advantage over whole blood that when properly pooled, typing of the patient is unnecessary and when dried or frozen, it will keep indefinitely.

About two years ago, the Maricopa County Medical Association felt that because of the size of this community, because of the difficulty of obtaining blood in adequate amounts at a moment's notice, and because of th eneed of plasma not only for civilian use but also for the military hosptials in this area, a blood bank should be established.

At a meeting, it was therefore voted by the members that the Maricopa County Medical Society would sponsor a blood bank and that it would elect three of its members to act on the Executive Committee of the Blood Bank and that these members in turn would elect a member of the Medical Auxiliary and a lawyer to make up the five members of the Executive Committee, the function of this body being to direct all the policies and attend to all the work necessary for the establishment of this organization.

Over a period of several months, the necessary money was raised by private contribution, from individuals, and from business concerns, as well as from the United War Fund. Money was also advanced by the County as a deposit against the withdrawal of blood and plasma in the treatment of the county poor. With this capital, the necessary architectural changes were made in the east wing of the Social Service Center, generously donated to house the Bank, the actual labor and most of the materials having been also donated. After a certain number of priority difficulties, the Salt River Valley Blood Bank was finally opened for operation on October 4, 1943.

The permanent staff consists of a full-time supervisor who is a graduate nurse, another full-time graduate nurse who lives on the premises, a full-time laboratory technician, and a full-time doctor who is also trained in laboratory work. At the outset, a part-time physician came in to supervise the drawing of the blood two afternoons and two mornings a week but when she was taken ill, the physician from the laboratory and the two nurses found that they could adequately carry on the bleeding program. Added to this full-time staff, there is a corps of about seventy faithful, hard-working volunteers without whom the Bank could not exist; their duties are manifold ranging from making donor appointments, registering the donors, operating a telephone switchboard, doing typewriting and bookkeeping, acting as hostesses and nurses' aides, transporting the blood, rounding up, registering, and typing individuals who cannot be donors, giving the resident nurse relief periods, since the Bank has to be ready to receive calls twenty-four hours a day, providing the homemade cookies and the beverages for the donors. It is to be noted that, in its operation, the Bank follows the strictest O.C.D. technique.

In order that the Bank may eventually be self-supporting, a service charge of $7.50 is made for each pint of blood and $10.00 for each unit of plasma, or half pint of plasma, plus a donor in each case. In order that the patients may feel their responsibility in keeping the shelves of the Bank supplied with blood, they are temporarily charged an extra $22.50 to be added to the service charge until the blood has been replaced by a volunteer donor; when this has been accomplished, a refund is immediately made.

The Blood Bank has all its business transactions with the hospitals and not with individuals. For the successful operation of the Bank it is important that the hospital, the physician, and the patient each does his part to see that this life-saving, pioneer organization is kept smoothly running.

It is to be hoped that, with the passing of time, there will be a growing realization by the practicing physician of the value of plasma in adequate amounts for the treatment of many disease conditions. In addition to surgical shock, it has been profitably used in acute pancreatitis, sunstroke, intestinal obstruction, in the toxemia and shock of many acute infections, in such conditions as nephrosis where there is a hypoproteinemia, and in post-operative pulmonary edema.

In conclusion, it should be emphasized that no civilian defense program and no preparation for a possible disaster from fire, explosion or other causes, is complete without a blood bank in operation, to provide plenty of plasma in the treatment of injured individuals. More-

over, further research in the use of blood substitutes in the treatment of disease can only be carried on in the laboratories of a blood bank. Even at this early date following its opening, units of concentrated blood cells, in other words plasma-free blood, has been provided for the treatment of severe anemia, and a universal blood O in which the plasma has been replaced by pooled plasma after the method of Litwins has been distributed. At present, tests for the Rh factor are being made so that Rh negative blood can be provided to pregnant mothers needing transfusions. These are only a few of the important problems that will undoubtedly arise and be studied in the laboratories of the Salt River Valley Blood Bank.

Louis B. Baldwin, M. D.

FUTURE ASPECTS PROCUREMENT AND ASSIGNMENT OF PHYSICIANS

Arizona has been highly complimented for serving our country so patriotically in the number of physicians it has supplied to the armed services. This has been done by our doctors in a commendable manner. We have left in Arizona, at the present, 345 physicians licensed to practice in the state, of this number we might say that 10 per cent are semi-active in that they do some work but have not for some time (prior to the war and since then) practiced on a full time basis. The greater percentage of these semi-retired physicians called at the Association offices or addressed us by letter when physicians were being reclassified for service and stated they would serve as needed. Those who have limited their practices because of failing health are continuing to maintain part time work and are keeping their licenses alive.

As to further physicians entering the armed services, Arizona will be expected to supply a small additional number from those within the age group and physicially available. This will be a very small number, indeed, from the present outlook. All physicians in Arizona stand ready with their services, civilian and otherwise, as needed.

Each physician is urged to remain in his present location and not to leave some small community for a larger one without notifying his local State Procurement and Assignment Service so that a replacement may be secured *before* a change is made.

Physicians and county medical society secretaries are asked to notify the undersigned of any changes in medical personnel in the various communities and counties. The letter following this report will be found of interest. We would like to know, promptly, of any deaths, departure from state, change in location within the state, county or community as soon as such change occurs. There has been some shift of physicians from some of the smaller counties to the larger ones, perhaps since the figures here were compiled; the totals, however, are essentially correct.

Signed,

Charles S. Smith, M. D.
Chairman, Procurement and Assignment of Physicians,
Nogales, Arizona.

Staff Meetings

GOOD SAMARITAN HOSPITAL STAFF
(Phoenix)

October 25, 1943

1. Primary Carcinoma of Fallopian Tube
 Dr. Kenneth E. Peterson.
2. Primary Sarcoma of Diaphragm.
 Dr. B. P. Frissell.

NOVEMBER 22, 1943

1. Disturbances of Urinary Bladder.
 Dr. J. W. Pennington.
2. Hodgkin's Disease.
 Dr. Howell Randolph.

ST. JOSEPH'S HOSPITAL STAFF
(Phoenix)

November 8, 1943

1. Case of Typhoid Fever Complicated by Symptomatic Purpura and Staphloecoccic Endocarditis.
2. Case of Brain Abscess, with Operative Procedure, and Treatment with Penicillin, with Presentation of Patient.
 Dr. James L. Johnson,
 Dr. E. Payne Palmer.
3. Placentia Previa with Review of Hospital Cases During Past Year.
 Dr. Angus De Pinto.

December 13, 1943

I. Ureteral Lithiasis in a Case of Pregnancy.
Presented by Dr. John W. Pennington.

II. Clinical Pathological Case of Biliary Cirrhosis.
Presented by Dr. Tressa Moran.

III. Officers Elected for Executive Staff for year 1944:

Chairman.....Dr. James Lytton-Smith
Vice Chairman.....Dr. Norman A. Ross
Secretary.....Dr. Robert H. Stevens
Board Members:
Dr. Fred C. Jordan
Dr. E. Henry Running
Dr. Louis C. Jekel

IV. Following are the Active Staff Members

Dysart, Louis	McKeown, Hilton J.
Smith, Willard	Ovens, James
Caniglia, S. R.	Ploussard, Chas. N.
Cohen, Matthew	Ross, Norman A.
DePinto, Angus J.	Sharp, Floyd B.
Felch, Harry J.	Sult, Charles W., Sr.
Frissell, Ben Pat	Westervelt, M. W.
Jekel, Louis G.	Mills, H. P.
Lytton-Smith, James	Badlwin, L. B.
Milloy, Frank J.	Charvoz, Elton R.
Peterson, Kenneth	Denninger, Henri S.
Randolph, Victor S.	Drane, James E.
Schoffman, Wm. F.	Fournier, Dudley
Stevens, Robt H.	Irvine, Geo. B.
Woern, W. H.	Kingsley, A. C.
Palmer, E. P., Sr.	McVay, L. C.
Watkins, W. W.	Pennington, J. W.
Case, Paul H.	Randolph, Howell
Cruthirds, A. E.	Running, E. Henry
Dirks, Maitland S.	Sherrill, W. P.
Flinn, Robert	Williams, Henry
Hamer, J. D.	Moran, Tressa
Jordan, F. C.	

MARICOPA COUNTY MEDICAL SOCIETY

Monday, November 1, 1943, 8 P. M.

SYMPOSIUM ON PULMONARY DISEASE

Re-Expansion of Lungs.....Dr. Fred Holmes
Pleurisy with Effusion.....Dr. Robert Flinn
Atelectasis in Pulmonary Tuberculosis....
.....Dr. E. A. Gatterdam
Atopic Annoyances in the Course of Pulmonary TBC.....Dr. E. W. Phillips
Pneumoconiosis.....Dr. H. J. McKeown
Basal Tuberculosis.....Dr. V. Randolph

Meeting December 6, 1943

I. Two Moving Pictures through Courtesy of Winthrop Chemical Company.
1. Edema Cardiac and Renal
2. Human Sterility.

II. Election of officers for 1944.

President.....J. W. Pennington
Vice President.....Mayo Robb
Secretary.....Ben Pat Frissell
Directors.....Duke Gaskins, F. T. Fahlen
Board of Censors...H. L. Franklin for 3 years
F. C. Jordan for 1 year

PHYSICAL MEDICINE

(Released by National Foundation for Infantile Paralysis.)

The establishment of the first center for the scientific study and development of physical medicine as a branch of medical practise was announced today by Basil O'Connor, President of The National Foundation for Infantile Paralysis. The center will be in the Graduate School of Medicine of the University ofPennsylvania at Philadelphia.

To set up this center, Mr. O'Connor stated, The National Foundation for Infantile Paralysis has made a grant totaling $150,000 for a five-year period from January 1, 1944 to December 31, 1948.

Mr. O'Connor said, "We believe this to be one of the most important steps which the National Foundation has taken. This will not only advance the treatment of infantile paralysis, but of many other diseases as well."

Mr. O'Connor explained that today there is no school or department connected with any of the medical training centers which is equipped to explore thoroughly on a sound scientific basis the possibilities of physical medicine.

This is but the first step in a program which, Mr. O'Connor said, should afford a scientific basis for physical therapy and lead to the establishment of a more desirable teaching program.

"If this branch of medicine can be given a sound professional standing," Mr. O'Connor declared, "medical men of the hihgest calibre will be attracted to it and practitioners will fully utilize its advantages. If research and study show there is little or no basis for treatment by some of the physical agents, then an equally great service will have been rendered, even though it be principally negative in character.

"Physical medicine plays a most important part in the treatment of infantile paralysis. Since it was first organized, The National Foundation has been continuously concerned with this phase of treatment. It has spent during the past six years over $350,000 to educate and train physical therapy technicians. An additional $364,000 has been granted to laboratories and universities to study many problems in physiology and medicine having a close connection with the practice of physical therapy, but never before has it been possible to combine in one place both medical research and teaching in this important field."

The Center for Research and Instruction in Physical Medicine will include:

1. A center for development of physical medicine as a scientific part of the practice of medicine.
2. A training center for medical leaders and teachers in this branch of medicine, and
3. A school for training technical workers under the guidance of such professional and scientific leadership, such a school to be only incidental to and dependent upon the first two purposes.

The Departments of Anatomy, Physiology, Pathology and other basic sciences of the University of Pennsylvania will cooperate in this proposed program. The general direction will be assigned to Dr. Robin C. Buerki, Dean of the Graduate School of Medicine.

ANNUAL MEETING
Phoenix, Arizona
April 14-15, 1944

BUSINESS SESSION: FRIDAY, APRIL 14, Sessions of the Council and of the House

SCIENTIFIC SESSIONS: FRIDAY EVENING, APRIL 14; SATURDAY FORENOON AND AFTERNOON, APRIL 15

PROGRAM PRESENTED BY: GROUP OF INSTRUCTORS FROM UNIVERSITY OF SOUTHERN CALIFORNIA.

Friday Evening, April 14, 1944 8:00 to 10:00 P. M.

1. Coccidioides—clinical and pathological considerations
 Doctor Edward Butt and Doctor Arthur Hoffman
2. Clinical Pathological Conference

Saturday, April 15, 1944 9:30 to 12:00 A. M.

1. Fred Moore, M. D.
2. Gurth Carpenter, M. B., M. R. C. P.
3. Philip Cunnane, M. D.

2:00 to 4:00 P. M.

1. Doctor Carpenter
2. Clinical Pathological Conference.

COMPLETE PROGRAM IN MARCH ISSUE OF ARIZONA MEDICINE

DAN L. MAHONEY, M. D., Chairman
Committee on Scientific Assembly.

Make Your Reservations Early — Headquarters: Hotel Westward Ho

Woman's Auxiliary

STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

PRESIDENT.....Mrs. Edward M. Hayden
314 N. Country Club Rd., Tucson

PRESIDENT-ELECT.....Mrs. James Allen
829 Crest Avenue, Prescott

FIRST VICE-PRESIDENT.....Mrs. Paul Case
718 W. MacDowell Rd., Phoenix

SECOND VICE-PRESIDENT.....Mrs. H. C. James
2634 East 4th, Tucson

RECORDING SECRETARY.....C. E. Bensema
Catalina Vista, Tucson

CORRESPONDING SECRETARY.....Mrs. B. B. Edwards
928 N. 2nd Ave., Tucson

TREASURER.....Mrs. E. H. Running
321 West Palm Lane, Phoenix

DIRECTORS: Mrs. B. B. Edwards, 928 N. 2nd Ave. Tucson
Mrs. J. D. Hamer, 1819 N. 11th Ave., Phoenix
Mrs. Harlan P. Mills, Rt. 2, Box 522, Phoenix

COMMITTEE CHAIRMEN

Cancer Project: Mrs. Hervey S. Faris, San Clemente Add'n. Tucson.
Legislative: Mrs. C. E. Patterson, 3 Paseo Redondo, Tucson
Public Relations: Mrs. Geo. L. Dixon, 2716 East 4th Street, Tucson.
Parlamentarian: Mrs. C. A. Thomas, Santa Rita Hotel, Tucson.
Publicity: Mrs. V. G. Presson, 1317 North Stone, Tucson.
Bulletin: Mrs. Dan L. Mahoney, 1916 East 4th St., Tucson
Hygia: Mrs. John L. Donahue, 2416 East Speedway, Tucson.
Historian: Mrs. Geo. B. Irvine, 1100 Mill Road, Tempe.
War Service: Mrs. J. D. Hamer, 1819 N. 11th Ave., Phoenix.

REPORT OF THE MID-SEASON BOARD MEETING
of the
WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

Chicago, Illinois - November 19, 1943

The mid-season board meeting of the Woman's Auxiliary to the American Medical Association was held in Chicago, Illinois on November 19, 1943, with Mrs. Eben J. Carey, the president, presiding.

In spite of the difficulties of travel, the meeting was very well attended, approximately fifty women being present.

In her president's report, Mrs. Carey stated that the American Medical Association has asked the auxiliary to assist with three major projects this year and they are as follows:

1. Assist in the promotion of the Nurse Cadet Corps.
2. Assist with the national registration of graduate nurses, this to be done under the direction of the Nurses' Association.
3. Help in every way possible to defeat the Wagner-Murray-Dingell Bill.

The finance committee offered the following recommendations which will be approved or disapproved at the annual meeting next June. They are:

1. To set aside 10% of the national dues as an emergency fund.
2. To raise the national dues to 75 cents capita.
3. To have a membership card printed.
4. That the Auxiliary buy a $1,000.00 bond.
5. That $1,000.00 be made available to the new officers immediately after the annual meeting.

The reports of the committee chairmen showed that fine programs have been set up for the year. The state presidents' reports told of many unusual and worthwhile projects. Among some of the outstanding work being done by state auxiliaries is blood typing and blood bank work; furnishing entertainment and assistance for girls in industrial centers, thus helping to prevent delinquency in many instances; loan funds; libraries and so on. All state auxiliaries are active in Red Cross and other war work. Hygeia is going along quite well, but should have much more support from the auxiliary as a whole, than it has had in the past.

The next annual meeting will be a full meeting. It will be held in Chicago from June 12-15, 1944, with headquarters at the Knickerbocker Hotel.

Respectfully submitted,

Clarice H. Hamer (Mrs. Jesse D.)
Director of the Woman's Auxiliary to the American Medical Association.

CONVENTION REPORT
Chicago June 7 - 9, 1943

The 21 annual meeting of the Woman's Auxiliary to the American Medical Association met in Chicago at the Drake Hotel on June 7-9, 1943. This meeting was a meeting of the House of Delegates since the regular convention had been cancelled due to the war. Any auxiliary member who wished to attend was more than welcome, however. There was an attendance of between three and four hundred.

The whole meeting was streamlined, but we were beautifully taken care of, both as to food and other comforts and conveniences.

The theme running through everything was our relationship to the war effort, how we could be of the most and best service to the whole program.

On Sunday, June 6, the Nominating commitee and the finance committee held their preconvention meetings and Monday morning was given over to the preconvention of the Board of Directors.

Monday noon the luncheon was in honor of the past presidents. This was held in the Gold Coast Room at the Drake and was very lovely. Mrs. M. A. Nix, the newly elected president of the Illinois auxiliary presided. There were the

auxiliary rather than outside of it, and also stresses the need for keeping our auxiliary alive if it is to be heard in the aftermath of the war—when the men come home we must be prepared to meet whatever challenge comes at that time.

The Legislative chairman reported that the study program which had been started the previous year had been carried on during the year. This being the study of Legislative Procedure.

The Public Relations chairman recommended promotion of health education for the general public, by sponsoring contests, posters and essays; working with the Cancer Control committee; giving scholarships for nurse and medical students; conducting health talks and clinics, etc.

The Hygeia chairman stated that 8582 subscriptions had been placed by April 7, 1943. Mrs. Edna Keck, Director of Health Education in Pennsylvania gets a large appropriation from the state for Hygeia, annually. Their slogan this year was Hygeia for health and victory.

Too much can not be said for the Bulletin, which is the national publication. Every auxiliary member should be a subscriber. The number of subscriptions is growing gradually, and this last year it was self-sustaining. It is purely an informative pamphlet, without thought of expansion into broader fields of journalism.

Some time was spent in discussing whether or not the auxiliary should have a pledge for the States to adopt. New members would be asked to sign it. The pledge proposed was as follows: "I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals." The purpose of such a pledge would be to make the members aware of their responsibility and it might also bring home to us the dignity of the position we occupy as members of the Woman's auxiliary. There was no decision about the pledge.

National membership cards were discussed and referred to the incoming Board. It was thought that it might be nice for identification purposes, especially for the members in the Armed Forces. It might make it easier for them in making contacts with the medical groups in the communities where they find themselves.

A War Service Committee was set up as a standing committee, its duty being to develop a war service program to be sent to the state auxiliaries. Mrs. Rollo K. Packard is chairman of this committee.

The Doctors' Aide Corps, which was organized in Atlanta, Georgia, in August, 1942, with the endorsement of their Advisory Council was presented. Details of this project are written up in the December 1942 Bulletin.

long, slender birthday candles mixed in with the center piece, red ones and white ones, and as she read the names of the past presidents she lit a candle in their honor.

The main speaker at the luncheon was Dr. Frank P. Hammond, chairman of the Advisory committee to the Illinois auxiliary. His subject was "Doctors' Ladies, Medicines Strongest Ally." In speaking of the critical period which the medical profession is going through Dr. Hammond said that it is unbelievable that there are still Medical Societies that not only discourage but turn down the efforts to organize Woman's Auxiliaries. In his opinion the auxiliary is or can be a powerful group, due to its sympathy and understanding of the practice of medicine as we have known it for the past generation and are remarkably well situated and equipped to publicize the methods and aims of the profession to the public through the normal established channels of community life throughout the country. He read a quotation from Mrs. Haggard which was as follows: "As your president, I shall have but one design—a single aim—and that is that we shall be so united, so strong, so forceful that no smallest opportunity from service shall pass us by . . . Whether we believe it or not, the greatest fight in this war is for moral order. We are all aware that the woman of this nation must quickly qualify herself to take her place where she is best fitted to serve. With members of the Woman's Auxiliary that place is fixed at once. There may be other places where is required to give her time and interest, but the auxiliary is on trial and must claim her best thought and effort. Of only secondary importance to munitions in defense comes health and the well being of the nation. Whatever we of the Woman's Auxiliary do in smaller circles, we have a profound duty toward the community and the nation at large. Everyone among us is fitted to do some particular thing well and to do it better than anyone without our advantages could possibly do it. It is because we are all working today that makes it possible for the medical profession to be so well organized for the national emergency. Never before have we faced such grave fears that our work might be rendered sterile, if we, as wives of doctors, relax vigilance and fail to meet the demands put upon us. With our nation at war we must attach ourselves to the things which will be of greatest assistance to the medical profession. There must be no doubt about the place we occupy in the national and medical defense programs."

Monday afternoon the meeting was opened in the usual manner. An address of welcome was given by Mayor Kelly. Mrs. Haggard in her "President's Address," stressed the point that the Woman's Auxiliary has striven to make its contribution to the war effort within the

States activities reported were: Red Cross work of all types, Civilian Defense, USO, Sale of Bonds and Stamps, Speakers' Bureaus, Radio programs, Cancer Control, Health talks and clinics, Chest drives, Well baby conferences, Ration Board Volunteer Service. Pennsylvania raised $1500.00 for a Blood Plasma Bank, a Kentucky auxiliary of 18 members sold $4000.00 worth of bonds, the Spokane, Washington auxiliary purchased a health film to be used in their schools, Idaho organized the Minute Maids, Wisconsin has a member on the State Legislative Council. The state of New York is especially active in legislative matters. Some state auxiliaries pay the dues for their members who are in the service, all states stressed the importance and placed much emphasis on the promotion of Hygeia and the Bulletin.

Tea was held in the Gold Coast Room, Monday afternoon honoring the out-going president, Mrs. Frank Haggard and the incoming president, Mrs. Eben Carey of Milwaukee.

Tuesday morning was given over to reports, summaries of which have been given.

The luncheon on Tuesday was in honor of Mrs. Haggard. The guest speakers were Dr. James E. Paullin, incoming president of the A.M.A. Dr. Morris Fishbein and Dr. Bauer.

Dr. James E. Paullin expressed interest in and appreciation of the aid which the auxiliary has been in developing medical programs for the counties and the states. He stated that he considered the A.M.A. fortunate in having such a group of women interested in the types of service and activities as have already been accomplished and equally grateful for the vision of the future and for the efforts in the present day needs.

Dr. Morris Fishbein talked on Post War Planning. He said: that regardless of what anyone thinks there will be tremendous changes in the practice of medicine. There must be jobs for ten million service men, 50 or 60,000 being medical men, besides the twenty million war workers. We must plan now for hospitals and health centers, where they are to be established, who is to run them, how they are to be financed and how managed. The auxiliaries can come to the aid of the medical profession and can find new outlets for service. An informed group such as the medical auxiliary can fit themselves well into a program of this kind and can render assistance that could not be supplied by any other group. They can contribute to the prevention of a world wide depression and can help in the reconstruction of the United States. He stated that the Board of Trustees is giving special attention to fitting back into civilian life 40,000 doctors who are now in the Armed forces. He feels that it will present the greatest opportunity that has ever arisen in this country to meet the challenge of distribution of medical care, the one charge that is made against medicine in the United States. It is now distributed according to the economic status of the communities. One way to arrive at proper distribution of medical care is to have available all of the necessary clinical, laboratory and scientific diagnostic facilities and aids to enable these men to practice the kind of medicine they were taught in medical school before they went into the service. He mentioned the Wagner-Murray-Dingell Bill which plans to extend social security to all of the people of the United States. The auxiliary is going to be asked to give to the Board of Trustees every assistance it can, the members can be a tremendous influence in affiliations with other organizations as well as in the auxiliary. In Dr. Fishbein's opinion it would be the height of folly if the Board of Trustees did not realize that in the woman's auxiliary they have a powerful weapon, capable of mobilizing vast forces in behalf of all that is good in medicine.

Dr. W. W. Bauer made the statement that the health of this nation is as good or better than that of any other nation and that the statistics about the great number of rejections are being changed. He brought out the fact that the medical profession must be kept before the public if it is going to keep its rightful place. The fifteen minute Broadcast of "Before The Doctor Comes" and the six broadcasts on "American Medicine Serves the World" were called to the group's attention.

At the post-convention board meeting the committee chairmen presented their programs for the coming year and an interesting talk on "Effect of the War on Medicine" by Dr. James P. Simonds, Professor of Pathology at Northwestern University then followed.

Dr. Simonds told the group that medical research is the basis of medical progress and that now research is given a new direction and scope. The volume has decreased some but those men that are remaining are doing more work. There are new things for the Army and the Navy; Teams of men are sent out by the government to have conferences regarding gas effects, blast injuries, bombs, depth bombs. This will continue after the war, there will continue to be research done on effects of high altitudes, treatment of wounds, etc. Industrial medicine is almost a new branch of medicine which is being developed. The war will no doubt have a permanent effect on medical education. Under the present system the student finishes high school, a committee studies his credentials, and he enters a college of his own choice, probably near his home. He may take an abbreviated course, just scientific subjects or a premedical course. If he does not show aptitude he is out and into the Army, if he is accepted he has to enter a medical school in his own corps area. If he enters medical October 1st he

goes through nine months then has one or two weeks vacation. He then begins his sophomore year and has one week between quarters and no summer vacation.

What effect this system will have on the students health is still a question, it is quite possible that it will be better. Under the old system the percentage of cases of tuberculosis was very high. Now the government furnishes the money. When the student has finished in three years instead of four, he goes into a hospital as an interne for a year, some then take a residency. This may have a tremendous repercussion. There may be a big demand for residency, they may not like private practice, it may have an effect on socialized medicine. Will the schools go back to the old system? The faculties are also working extra time. Dr. Simonds said that medical schools throughout the world have deteriorated, for instance Russia with twelve medical schools graduates more students than we do with seventy-two schools. One question is, what can the United States do to help reestablish the schools in other countries, Dr. Simonds feels that it is very important for the auxiliary members to acquaint themselves with the changes in medical education. Our legislation must provide social security for the weak and opportunity for the stronge. Post-war planning must take an important place.

Mrs. Eben J. Carey of Milwaukee, the incoming president in her address, brought out the fact that as doctors' wives we share an idealism and a standard of values held by few other groups. We are governed by the code of ethics that our husbands accept upon graduation from medical school. This war has brought to the auxiliary a challenge as well as an inspiration. We shall meet the challenge by concentrating our efforts on our war activities and through them we will assume the leadership in health education. The auxiliary will have to take on the medical society's work in public relations. We should be leaders and teachers in classes such as nutrition, nurses aides, first aid and so on. Mrs. Carey closed her talk by saying that our service is rewarded by the personal satisfaction of assisting the noblest profession on this Earth, the practice of medicine.

Respectfully submitted,

(Mrs. Jesse D.) Clarice Hamer
Official delegate to the National
Auxiliary Convention.

COUNTY AUXILIARY NEWS

Pima Auxiliary

The Pima County Medical Auxiliary is meeting the second Tuesday evening each month, coinciding with the regular meeting of the County Medical Society. There are 62 active members and 28 associate members.

The activities for the year include one half the meetings being held at the Red Cross work rooms, and the other half in the homes where we do sewing for the children of the Preventorium.

Mrs. L. H. Howard, Chairman of the Philanthropic Committee, purchased 43 pairs of pajamas for the boys and girls of the Preventorium; also 58 yards of outing flannel which we are working into pajamas. During the summer and fall, 110 garments, shoes, sox, quilts, books, and Christmas cards were donated by members and friends to the Preventorium.

During the summer, members met at the Red Cross room to sew and make surgical dressings.

Mrs. C. E. Patterson, Chairman of the Courtesy Committee, makes personal calls whenever possible upon wives of doctors in the armed services. They are especially invited to our meetings.

Mrs. George L. Dixon, Chairman of the Public Relations Committee, attended a meeting to encourage the enlistment of nurses in the army service.

Mrs. C. E. Patterson attended a meeting during the nation-wide campaign to encourage the women of Tucson to join the Waves.

Mrs. J. A. Omer, Hygeia Chairman, sent sample copies to 17 local organizaitons.

Eleven members have volunteered to sell Christmas seals.

Mrs. W. C. Davis, President, endeavors to keep the Auxiliary activities in accord with the added responsibilities of the members.

Publicity Chairman,
(Mrs. V. G.) Lillee Presson

MARICOPA AUXILIARY

The Maricopa Woman's Auxiliary meets in regular monthly session the first Monday of each month at which time the Medical Society also convenes. Following the two sessions, the groups join for a social hour. Auxiliary sessions opened this season with a tea.

Activities

Early in the season, the Auxiliary sponsored a dance, held at the Phoenix Country Club, for the benefit of the Blood Bank. The sum of $1,500 was cleared in this manner and donated to the Bank.

Additional projects will be undertaken when Mrs. Jesse D. Hamer returns from the National Board meeting and brings us recommendations made by that body. Mrs. Hamer is Regional Chairman of War Participation and will probably have returned and presented her report by the time this goes to press.

The Maricopa Auxiliary anticipates its full year of social, in keeping with current conditions, and civic activities.

Publicity Chairman
Ruth Hartgraves

GILA COUNTY MEDICAL SOCIETY NAMES OFFICERS

Dr. Clarence Gunter, Globe, was named president of the Gila County Medical Society at its annual meeting held Tuesday night in the Dominion Hotel. Other officers elected include: Dr. Ira E. Harris, vice president; Dr. Nelson D. Brayton, secretary-treasurer, and Dr. Russell R. Noice, censor. The latter three doctors are from Miami.

The meeting was in the form of a dinner party honoring the doctors' wives, and was under the supervision of Mrs. Cyril M. Cron, wife of the retiring president.

Upon adjournment of the business meeting, bridge was played by the ladies, with first prize going to Mrs. Gunter. Mrs. Harris took second and Mrs. Guy Ligon, low.

The society voted in favor of making the dinner party an annual efent.

The following members and their wives attended: Dr. and Mrs. Nelson D. Brayton, Dr. and Mrs. Cyril M. Cron, Dr. and Mrs. Adrian Clark, Dr. and Mrs. Clarence Gunter, Dr. and Mrs. Lee Gray, Dr. and Mrs. T. C. Harper, Dr. and Mrs. Charles B. Huestis, Dr. and Mrs. Russell R. Noice and Dr. and Mrs. Marcus G. Kelly.

Among the guests of the society were:

Mrs. Dixie Lee (Burton B.) LaDow, daughter of Dr. and Mrs. Brayton; Dr. and Mrs. Joseph G. Plant, Inspiration; Dr. and Mrs. Joseph Lee Sackler, San Carlos; Dr. and Mrs. Harold M. Gibbons, Miami; Dr. and Mrs. A. J. Boose, Globe; Dr. Waldo J. Lehman, formerly of India, now of Miami; Dr. and Mrs. Chester R. Swackhamer, Superior; Administrative Officer and Mrs. Guy Ligon, Miami-Inspiration Hospital, and Superintendent and Mrs. George Evans, Gila County Hospital.

ARMY TRAINS MEN WITH POOR VISION FOR LIMITED MILITARY SERVICE

About a thousand men a week, a majority of whom were rejected for active military service because of defective vision, now are entering the Army's Limited Service School for special training, according to the Better Vision Institute. Men with visual shortcomings entering the school, which gives a month's intensive training, outnumber two to one the men with all other defects combined. These men with poor eyesight have only about one-tenth to one-

Directory

ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892
422 HEARD BUILDING, PHOENIX, ARIZONA

OFFICERS AND COUNCIL

O. E. Utzinger, M. D. (1947) Ray
President
Dan L. Mahoney, M. D. (1947) Tucson
President-Elect
Florence B. Yount, M. D. (1944) Prescott
Vice-President
Frank J. Milloy, M. D. (1944) Phoenix
Secretary
C. E. Yount, M D. (1944) Prescott
Treasurer
F. W. Butler, M. D. (1944) Safford
Speaker of the House
Harold W. Kohl, M. D. (1944) Tucson
Delegate to A.M.A.
J. D. Hamer, M. D. (1945) Phoenix
Chairman Medical Defense

District Councilors

John W. Pennington, M. D. (1944) Phoenix
Central District (Gila, Maricopa, Pinal, Yuma)
George O. Bassett, M. D. (1943) Prescott
Northern District (Apache, Coconino, Mohave, Navajo, Yavapai)
Chas P. Austin, M. D. (1945) Morenci
Southern District (Cochise, Greenlee, Graham Pima, Santa Cruz)
E. Payne Palmer, M. D. Phoenix
Chairman of the Council

Councilors-at-Large

E. Payne Palmer, M. D. (1946 Phoenix
*Hal W. Rice, M. D. (1945) Bisbee
D. F. Harbridge, M. D. (1944) Phoenix
*Serving unexpired term of W. Paul Holbrook in Service.

COMMITTEES

Scientific

Scientific Assembly — Dan L. Mahoney, President-Elect, Chairman, Tucson; T. C. Harper (1944), Globe; F. J. Milloy, (1945), Phoenix; D. W. Kittredge, Jr., Flagstaff, (1946); H. L. Franklin, (1944), Phoenix.

Scientific Education and Post Graduate Activities—A. H. Dysterheft, (1946), McNary; H. J. McKeown, (1944), Phoenix; Florence B. Yount, (1945), Prescott; Chas. S. Kibler, (1945, Tucson.

Industrial Health—C. B. Huestis, (1946), Hayden; C. P. Austin, (1944), Morenci; E. M. Hayden, (1945), Tucson.

Syphilis and Social Diseases—L. G. Jekel, (1946), Phoenix; O. B. Moon, (1944), Bisbee; Geo. O. Bassett, (1945), Prescott.

Maternal and Child Health—Hiward C. James, (1945), Tucson; Fred C. Jordan, (1944), Phoenix; W. P. Sherrill, (1946), Phoenix.

Orthopedics—E. W. Adamson, (1946), Douglas; Royal W. Rudolph, (1944), Tucson; Jas. Lytton-Smith, (1945), Phoenix.

Tuberculosis Control—Sam H. Watson, (1946), Tucson; Jas. H. Allen, (1944), Prescott; E. W. Phillips, (1945), Phoenix.

Cancer Control—E. Payne Palmer, Phoenix; M. G. Wright, Winslow; Geo. O. Hartman, Tucson; J. N. Stratton, Safford.

History and Obituaries—Historian, Hal W. Rice, Bisbee; J. D. Hamer, Phoenix; Frank J. Milloy, Phoenix.

Non-Scientific

Public Policy and Legislation—C. A. Thomas, (1944), Tucson; J. D. Hamer, (1945), Phoenix; Walter Brazie, (1946), Kingman.

Medical Defense—J. D. Hamer, Phoenix, Chairman; D. F. Harbridge, Phoenix; A. C. Carlson, Jerome.

State Health Relations—A. K. Duncan, (1944), Douglas; Donald F. Hill, (1945), Tucson; E. Henry Running, (1946), Phoenix.

Medical Economics—Meade Clyne, Tucson; Melvin L. Kent, Mesa; A. P. Kimball, (1946), Yuma.

Industrial Relations — C. E. Yount, Prescott, Chairman; Meade Clyne, Tucson; John W. Pennington, Phoenix; A. C. Carlson, Jerome; Jas. Lytton-Smith, Phoenix; Frank J. Milloy, Sec'y to Committee.

Public Health Education—H. L. McMartin, (1944), Phoenix; J. S. Gonzalez, (1946), Nogales; Paul H. Case, (1945), Phoenix; Geo. O. Bassett, Prescott.

Editing and Publishing—J. D. Hamer, (1944), Phoenix; D. F. Harbridge, (1945), Phoenix; Frank J. Milloy, (1946).

Auxiliary Advisory—Florence B. Yount, (1945), Prescott; J. D. Hamer, (1944), Phoenix; W. Claude Davis, (1946), Tucson.

twentieth of normal vision. Although one out of seven of the men with non-visual shortcomings are rehabilitated for general military service, very few of the men with eye defects are reclassified for general service. By utilization of the men from the school, thousands of other soldiers have been released for combat service.

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Book Reviews

THE MIND OF THE INJURED MAN. By Joseph L. Fetterman. M.A., M.D., Pp. 260, with 28 illustrations. Industrial Medicine Book Company, Chicago, Illinois.

There is a tendency on the part of the medical profession to treat the disease or injury and not the patient; to overlook the fact that, figuratively speaking, scars of the mind as well as actual scars of the body may follow injury with residual impairment in function of the entire organism. Dr. Fetterman, in this book, discusses many of the mental disturbances which occur in the injured man and offers valuable suggestions for prevention and treatment of such conditions. He deals at some length on the anatomy and physiology of the nervous system and with many of the diseases and organic injuries which are frequently encountered. At least one-third of the book is taken up with the subject of neuroses, particularly as related to injuries, and it is this portion of the book which gives it importance. There is also an interesting discussion on malingering and psychopathic personality. A concise discussion of neuroses is given and several classifications enumerated. One classification which is of particular value in determining the course of treatment and the question of compensability is based upon the most significant factor involved in the production of the neurosis. Four types are given:

1. Injury neurosis—Due to actual organic damage to the nervous system.
2. Industrial neurosis—Due to dissatisfaction with the job and maladjustment.
3. Indemnity neurosis—Arising from compensation uncertainities, either actual or anticipated.
4. Inherent neurosis—Precipitated by accident but arising mainly from definite pre-existing nervous instability.



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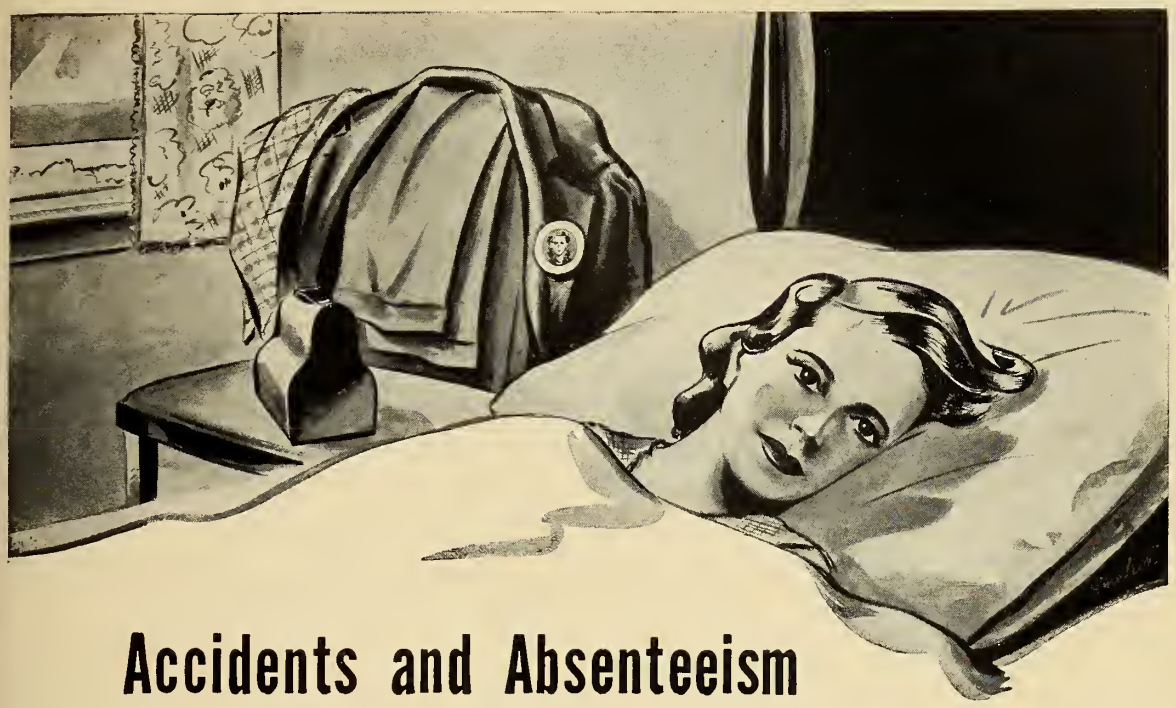
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In an enlightening discussion of compensation problems in the neuroses of industry, the author frequently emphasizes his opinion regarding the pernicious and retarding effects of weekly or monthly compensation payments. Early settlement with a lump sum payment based upon a three to six months period is suggested as fair for the average case.

In his preface the author states that the book was written not only for the medical profession but for those laymen who have to do with the evaluation and adjudication of injury cases, such as industrial commissioners, claims agents, insurance adjusters and judges. This doubtless accounts for the elementary style and frequent simplified wording in parentheses following technical terms, even such terms as will ordinarily be familiar to the intelligent reader, at least to any reader sufficiently well informed to assimilate the general subject matter. For the reader who desires a more thorough and detailed technical discussion of the many subjects discussed, the author has compiled an extensive bibliography. The book is well bound, is printed on fine quality paper, and the numerous cuts and x-ray reproductions are of excellent quality. A reading of this book and a thorough study, at least of those portions pertaining to neurosis, is recommended to anyone dealing with injured cases, particularly those in which compensation is involved.

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TRANSURETHRAL PROSTATECTOMY, by R. M. Nesbit. With a chapter on the "Vascular Supply of the Prostate Gland" by R. H. Flocks, 1943.

First description of a systematic and planned technique for performing transurethral operations upon the prostate gland! The publisher claims that neither the original materials of this text (inclusive of the author's text descriptions nor Didusch's original drawings are available elsewhere.

CLINICAL ANESTHESIA, by John S. Lundy. 1942.

Regional and general anesthesia for all surgery. DENTISTS: Note Chapters "Dental Local Anesthesia" and "General Anesthesia in Dentristy."

DISEASES OF THE NOSE, THROAT AND EAR; medical and surgical, by W. L. Ballenger and H. C. Ballenger, 8th ed. 1943.

The latest edition of this classic.

DISEASES OF THE BREAST, by Charles F. Geschickter. With a special section on treatment in collaboration with Murray M. Copeland. 1943.

Importance has been placed on microscopic pathology in the diagnosis and treatment of lesions of the breast. Benign and malignant growths comprise the greater part of the text.

PHYSIOLOGICAL BASIS OF MEDICAL PRACTICE, by C. H. Best and N. B. Taylor, 3rd. ed. 1943.

Physiology of all systems has been brought up to date. Physicians will welcome the interjection of remarks on the application of treatment to specific disturbances. There is now a Spanish and Portuguese edition of this text.

BRUCELLOSIS (UNDULANT FEVER), by H. J. Harris. 2nd. ed. 1941.

There has accumulated unmistakable evidence that chronic brucellosis is even more common than the acute form of disease. And so, Dr. Harris has collected all phases of this disease in one volume for the busy physician.

URINE AND URINALYSIS, by Louis Gershenfeld. 2nd. Ed. 1943.

Another classic which needs no annotation.

PRINCIPLES AND PRACTICE OF INDUSTRIAL MEDICINE, edited by F. J. Wampler. 1943.

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OPERATING ROOM TECHNIC, by Anna M. O'Neill. 1943.
For the surgical supervisor and her staff.

HISTORY AND EVOLUTION OF SURGICAL INSTRUMENTS, by C. J. S. Thompson. 1942.
Many of these instruments were destroyed when the Nazi bombed London and the Royal College of Surgeons' building. Many of the phootgraphs and descriptions in this book are all that posterity will know of articles like Pare's cutting compass, cumbersome surgical saws, the first wooden specula, ancient operating tables and other records of the developing technic of surgery.

TEXTBOOK OF PERIODONTIA, by S. C. Miller and others. 2nd. ed. 1943.
Periodontoclasia is a disease long known but resisting all efforts made for its control until comparatively recent years. Here are visible evidences that the conquest of this disease can be prevented and, if not too far advanced, can be cured.

PSYCHOSOMATIC MEDICINE; the clinical application of psychopathology to general medical problems, by E. Weiss and O. S. English. 1943.
This is a book to help you solve your problem cases. It shows you how to cope with the obscure and complicated cases; the irritating patient. It tells you how to differentiate bodily symptoms of psychic origin from those of organic etiology; how to pick out the emotional factors complicating physical diseases; how to uncover the underlying causes of these emotional disturbances and how to institute practical and resultful therapy—in your office and at the bedside.

THERAPY OF THE NEUROSES AND PSYCHOSES, by S. H. Kraines, 2nd. ed. 1943.
The treatment of nervous and mental conditions is very frequently reserved for the specialist; but from one-third to three-quarters of the cases of the general practitioner or the non-psychiatric specialist are in need of psychotherapeutic as well as medical attention. This volume states as clearly as possible the factors underlying the formation of nervous and mental diseases and their treatment. Physicians other than psychiatrists will be able to make practical and valuable application of the principles of therapy herein discussed.

ORAL DIAGNOSIS WITH SUGGESTIONS FOR TREATMENT, by K. H. Thoma. 2nd ed. 1943.
This book covers diseases and abnromal conditions of the teeth, jaws, and other organs and tissues of the mouth, as well as suggestions for treatment. Secondary manifestations that are not diseases but are symptoms only of some general disturbances are considered. Somatic diseases caused by oral infection are also described.

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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:11, July, 1943.

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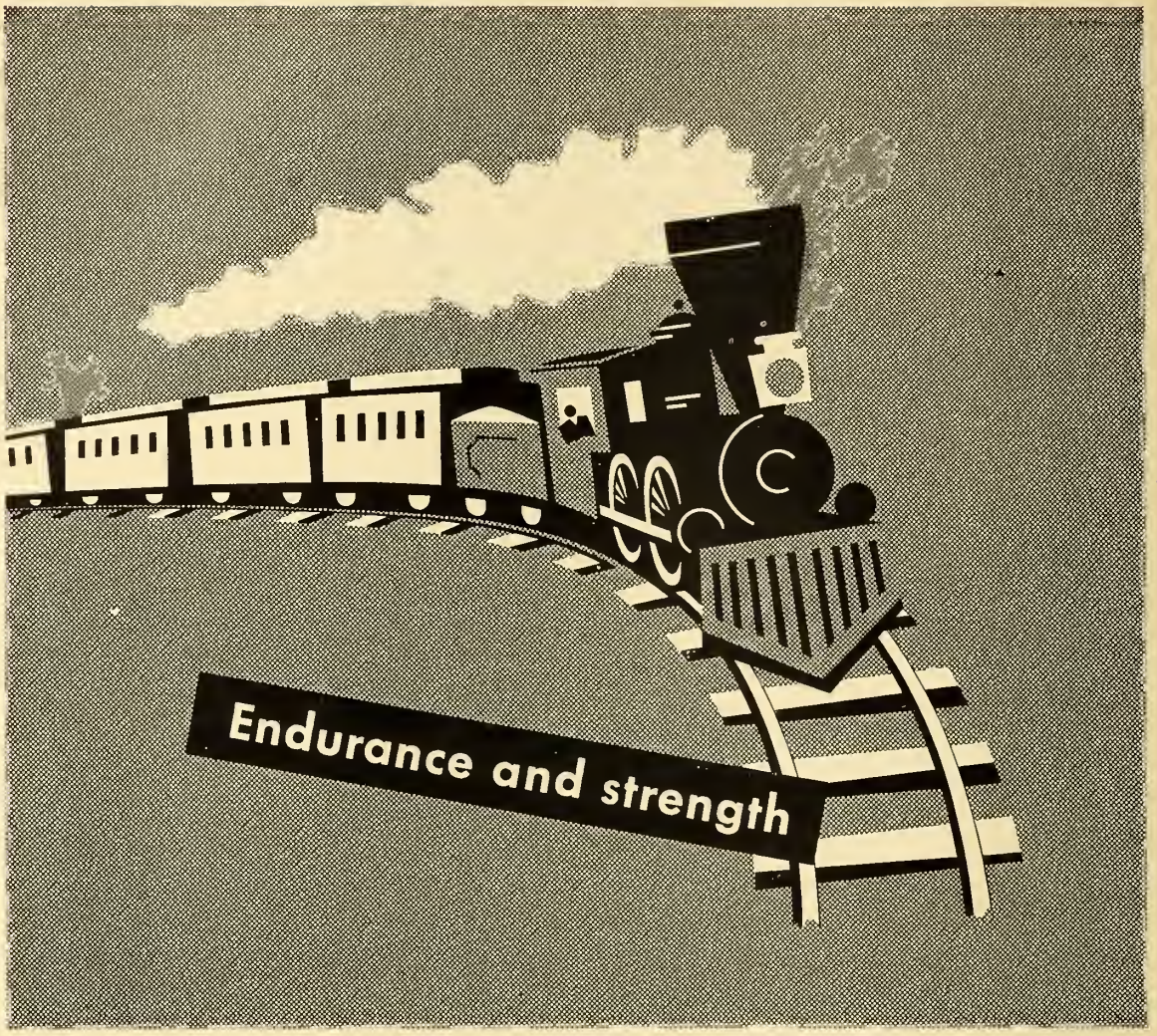
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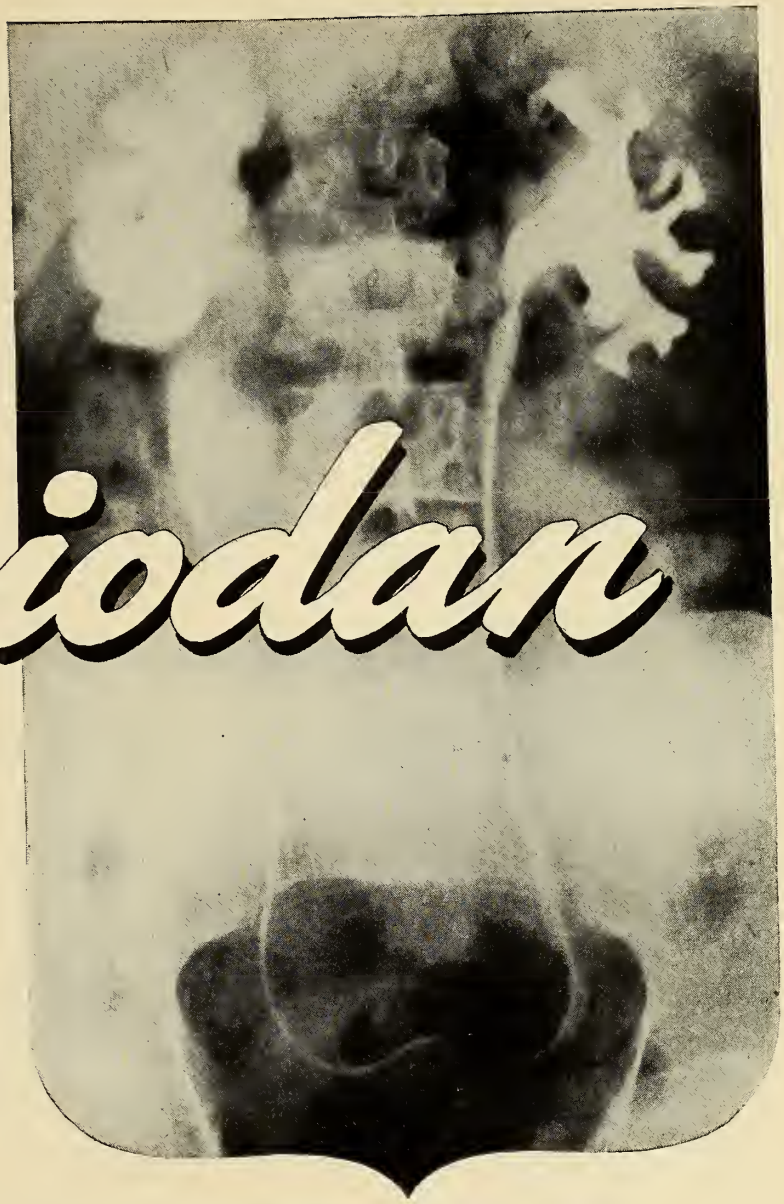
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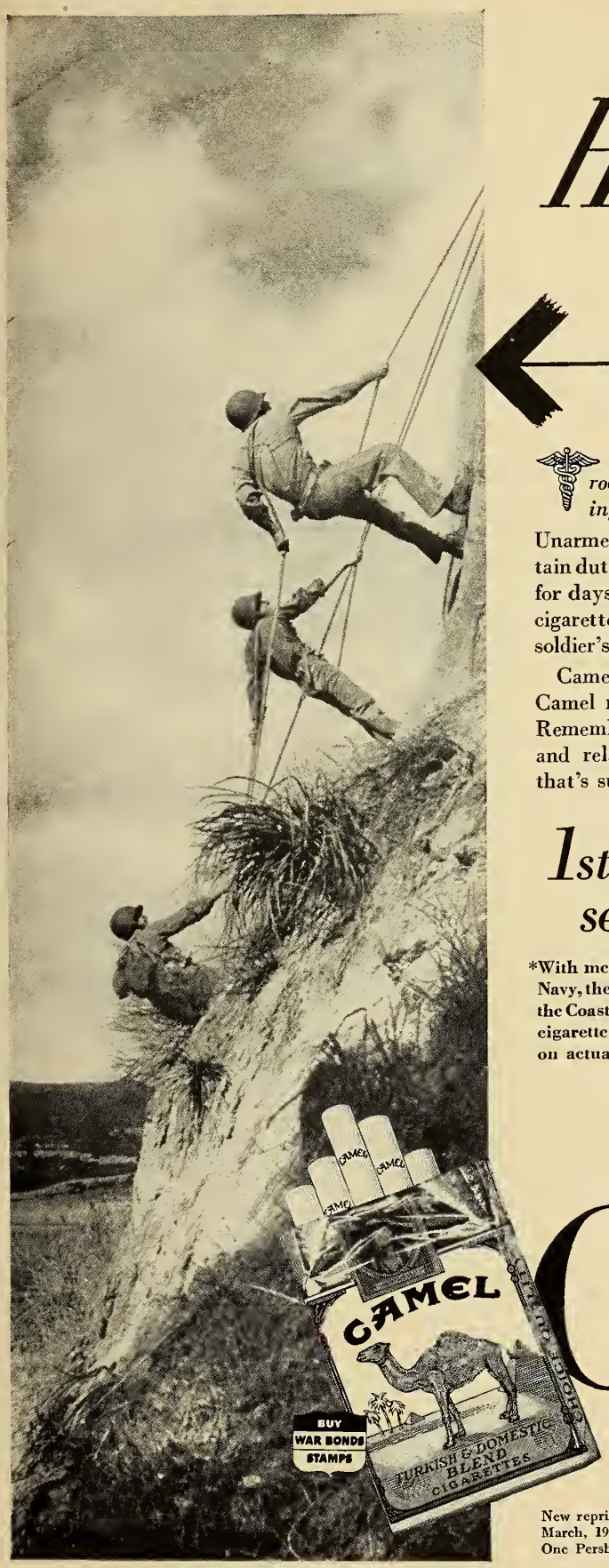
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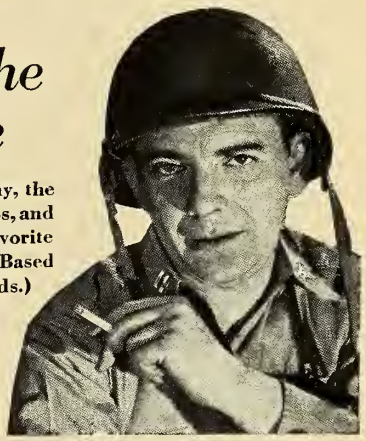
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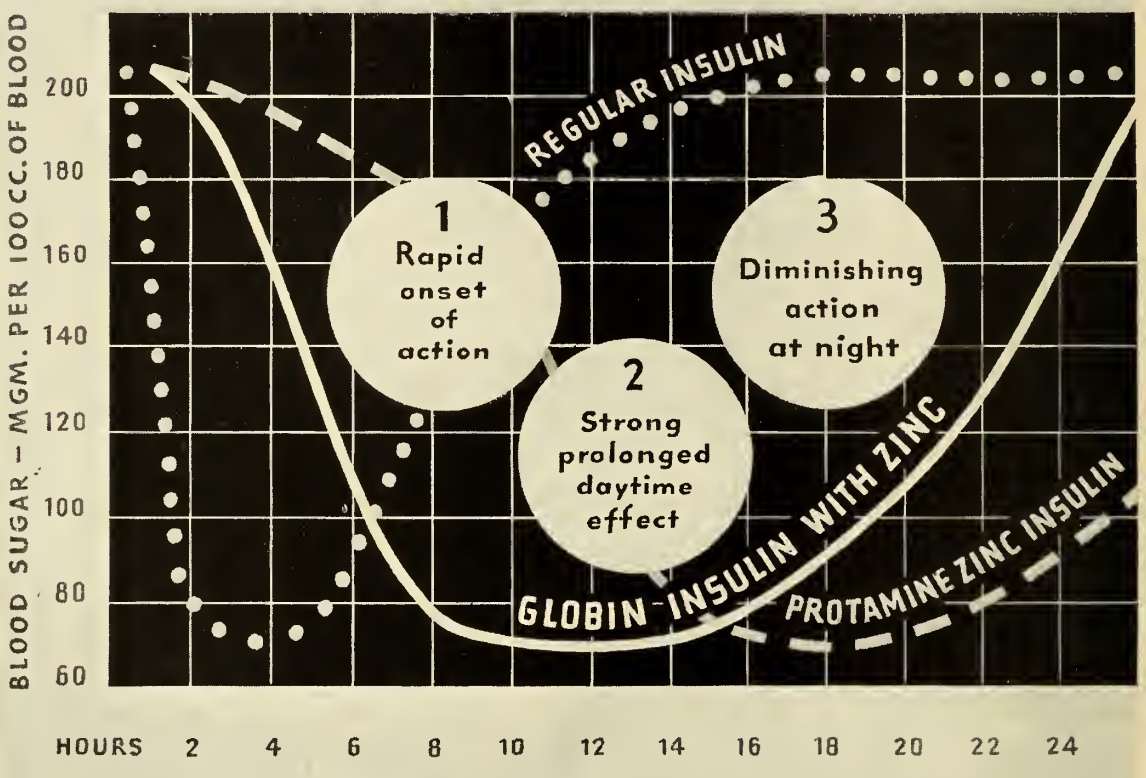
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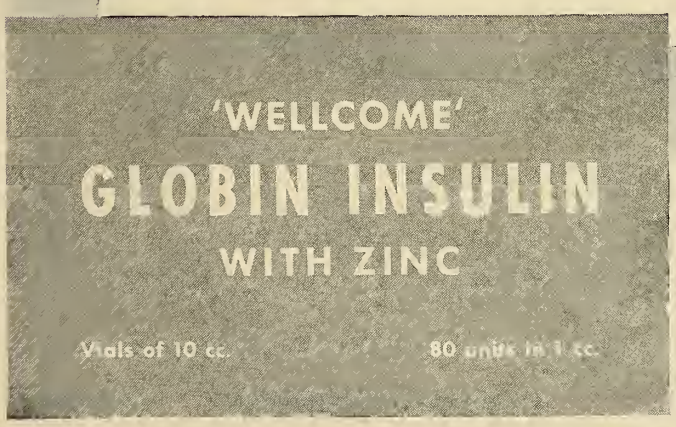
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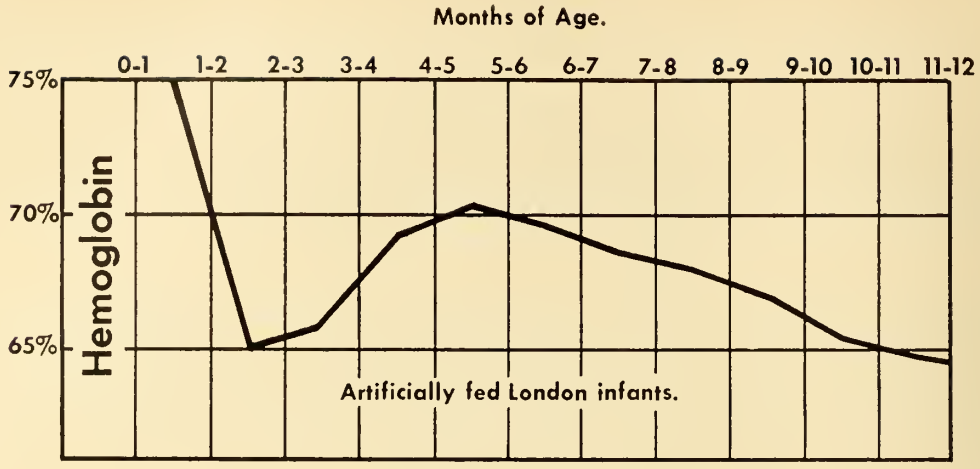
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Literature on request



NUTRITIONAL ANEMIA IN INFANTS

The consensus is that it is important for infants to receive generous additions of iron during the first 6 months. This chart, adapted from Mackay,[1] shows the reason for the need of iron supplements.

REASONS FOR EARLY FEEDING OF PABLUM (OR PABENA)

1. The infant's initial store of iron is rapidly depleted during the first months of life. (Mackay,[1] Elvehjem[2]). About 30% of the iron freed from the hemoglobin during the first two months is lost, and while hemoglobin destruction takes place, all infants are in negative iron balance. (Jeans,[3] and Usher, et al.[4]).

2. During the early months of life the infant obtains very little iron from milk — 1.44 mg. per day from the average bottle formula of 20 ounces or possibly 1.7 mg. per day from 28 ounces of breast milk. (Holt,[5] Jeans[3]). The incidence of nutritional anemia has been found to be high among infants confined largely to a diet of cow's milk. (Davidson, et al.[6] Usher, et al.,[4] Mackay[1]).

For these reasons and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Strauss,[7] and Gottlieb and Strean[8]), the pediatric trend is constantly toward the addition of iron-containing foods at an early age, both to normal infants and those with pylorospasm. (Neff,[9] Blatt,[10] Brennemann,[11] Monypenny[12]).

THE CHOICE OF THE IRON-CONTAINING FOOD

1. Many foods high in iron actually add very little to the diet because much of the mineral is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 Gm. (Bridges[13]).

2. To be effective, food iron should be soluble. Some foods fairly high in total iron are low in soluble iron. Thus egg yolk and liver have less soluble iron than does farina, which is very low in total iron. (Summerfeldt[14]). Oxalate-containing leafy vegetables are low in soluble iron and appear not to be well utilized as a source of iron by infants. (Kohler, et al.,[15] and Stearns[16]).

3. **Pablum (and Pabena) are high both in total iron (30 mg. per 100 Gm.) and soluble iron (7.8 mg. per 100 Gm.) and can be fed in significant amounts at an early age, without digestive upsets. (Blatt,[10] Monypenny[12]). Clinical studies of sick and well babies have shown Pablum to be of value in raising hemoglobin values (Crimm, et al.,[17] Summerfeldt and Ross[18]), even when egg yolk and spinach were not effective (Stearns[16]).**

Pablum, a palatable mixed cereal food, vitamin and mineral enriched, and cooked thoroughly and dried, consists of wheatmeal (farina), oatmeal, wheat embryo, cornmeal, powdered beef bone, sodium chloride, alfalfa leaf, brewers' yeast, and reduced iron. (The oatmeal form of Pablum is called Pabena.)

[1-18] **Bibliography on request.**

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ut so far I have learned of no other e suggestion which provides the neces- fety valve which such an arrangement would give. It would be tragic if a lot ll business concerns were wrecked and orkers thrown into idleness because of nability to cut through the red tape ed in getting their claims settled.

RESPONSIBILITIES OF CONTRACTORS

e making these statements with re- o action by the Federal authorities, I ize, also, that business concerns which war contracts have a responsibility on part to facilitate speedy settlement of ated war contracts. They have the re- bility for preparing their claims ac- y and speedily and presenting them per form. Some progress has been toward getting a recognition of the at industry must play in this respect, rrently more and more experience of ort is now being gained. The con- ng services of the Government, I know, very helpful attitude towsrd this sit- , and the local office of W. P. B. has shed a regional advisory service for war faced with problems resulting from t termination. That is a very helpful nent.

ation to make possible the prompt nt of terminated war contracts is now. It will be unsafe to wait until a deluge of contract terminations to hrough legislation on short notice. roblem is too complicated to be deal- ffectively in that way.

MATERIALS FOR CIVILIAN PRODUCTION

ddition to making provision for the ent of terminated war contracts, there the task of facilitating the flow of ials for civilian production as soon as materials can be spared from war pur- t hope that we shall not have unem- ent here in Massachusetts because d materials, which are physically in ex- e in the United States, are unavailable by manufacturers as a result of leg- or administrative restrictions. The legislation vesting the priority power President, which power of the Presi- delegated to the Chairman of the War on Board, is probably adequate to the flow of materials, but it may be ry for the Congress to make sure that ministration of the priority power by ar Production Board is directed effec- toward the speedy and smooth resump- f civilian production. The War Pro- n Board should be expected to elim- ts limitation orders, its conservation and its allocation systems just as as the needs of the war program per-

use of their effects on plans for re- yment, I foresee that these problems tling canceled contracts and securing pplies of raw materials for civilian pro- n will presently be matters of wide- concern here in Massachusetts.

summarize, my specific recommenda- re that legislation should be enacted r the following points:

EMENT OF TERMINATED WAR CONTRACTS

terminated contracts should be set- egotiation by the contracting agen- the Government, and the negotiated nt should be final in the absence or misrepresentation.

mpt partial payments amounting to arge percentage of the claim should d to each contractor upon submittal fied statement of the claim, subject, , to a pensity for perjury.

al settlement committees should be red to authorize partial payments delay of over 30 days occurs on the the Government agency.

4. Contracting agencies should be required to give prompt clearance of claims on work in process. There should be clear-cut procedures for authorizing the removal of Government-owned inventories and machines, with storage at Government expense, in order that civilian production may be started.

5. The dilemma of the subcontractors must be resolved. At the present time the Government exercises the right of approving all payments in settlement of subcontracts but does not assume any responsibility to the subcontractor, with the result that the subcontractor in many cases cannot secure action by either the prime contractor or the contracting agency. I suggest that the local settlement committees proposed above should be empowered to approve settlement of subcontracts if a delay occurs in approval by the contracting agency.

B. DECONTROL OF MATERIALS

1. As soon as war conditions permit, the rules for the release of scarce raw materials should be revised, with a view to facilitating the rapid resumption of civilian production.

A Magnificent Job

EXTENSION OF REMARKS
OF
HON. LOUIS LUDLOW
OF INDIANA
IN THE HOUSE OF REPRESENTATIVES

Tuesday, January 11, 1944

Mr. LUDLOW. Mr. Speaker, Indianapolis and Indiana are very proud of the great pharmaceutical house of Eli Lilly & Co., which has processed its millionth blood donation without a cent of profit. This record is in keeping with the fine, generous spirit which this firm always has manifested in the service of our country and which long ago brought to it the recognition of an Army-Navy E award. Commenting on the company's contribution to the blood campaign, which means so much in saving the lives of our precious boys, the Indianapolis News says editorially:

LILLY'S CONTRIBUTION

In the midst of charges that some concerns are making an unholy profit from war contracts it is heartening to learn that the Indianapolis laboratories of Eli Lilly & Co. have processed 1,000,000 blood donations entirely on a nonprofit basis.

In addition to performing this service at cost, the expense involved has been decreased constantly through the introduction of more efficient methods.

There certainly could have been nothing unethical if the Indianapolis pharmaceutical house had sought a minimum profit for the work it has been doing.

Donations of blood at Atlanta, Chicago, St. Louis, Detroit, Cincinnati, Louisville, Columbus and Indianapolis have been converted into live-saving plasma at the Lilly plant, involving the installation of new equipment and the employment of much additional skilled personnel.

The patriotic Americans who donated this blood, however, got nothing for their contributions and the Lilly Co. determined that its connection wiht the effort to strengthen ths wounded on every fighting front should be entirely shorn of private gain. From beginning to end, it has been and is—a magnificent job.

The Gates Must Not Be Closed

EXTENSION OF REMARKS
OF
HON. SAMUEL DICKSTEIN
OF NEW YORK
IN THE HOUSE OF REPRESENTAT

Tuesday, January 11, 1944

Mr. DICKSTEIN. Mr. Speaker, leave to extend my remarks in the ORD, I include the following editorial the Daily Mirror of January 4, 194

THE GATES MUST NOT BE CLOSE

When Congress reconvenes on Janu it should take up the Gillette-Taft-Bal Rogers resolution.

This resolution calls for the format a Presidential commission to create m ery, in conjunction with the Unite tions, to rescue the millions of Jew are now being systematically exterm by the Nazis and their Quislings.

When the Presidential commission g work, one of the first things it shoul to seek the abrogation of the Cham "White Paper" of May 1939.

At present, Palestine is being admin by Great Britain in conformity with t icy embodied in the "White Paper," tue of which Jewish immigration int tine is now limited and is to be pr stopped after March 31, 1944. The to be reduced to a permanent min 33 percent in the country and the and to Jews is to be practically pro

A DIRECT REPUDIATION

This is a direct repudiation on En part of the League of Nations Mands the Balfour Declaration incorporated mandate of 1917.

According to this declaration, Palest to become a national Jewish home un protectorate of England.

In 1939, after the Jews had created ern civilization in what was practic Arabian desert, England turned h on her solemn promise of 1917.

This perfidity of Britain toward t was denounced by no one more vig than by Winston Churchill in Parlian the debate on the "White Paper" when he said:

"MR. CHURCHILL'S REGRET

"As one intimately and responsib cerned in the earlier stages of our F policy, I could not stand by and see engagements into which Britain has before the world set aside for reason ministrative convenience or for the quiet life, I should feel personally rassed in the most acute manner i myself by silence or inaction to wha regard as an act of repudiation.

"I regret very much that the pledg Balfour Declaration, endorsed as it h by successive governments, and the tions under which we obtained the m have both been violated by the Gover proposal.

"I select one point upon which plainly a breach and repudiation of four Declaration—the provision tha immigration can be stopped in 5 ye by the decision of an Arab majority. a plain breach of a solemn obligation

As the Palestine Mandate was ord the League of Nations, it cannot b gated even by Great Britain herself the consent of the League.

A SOLEMN OBLIGATION

But the Lesgue did not give its cons the 1939 abrogation.

President's Page--What of Health Insurance

IT is plain from the activities of the various state medical associations that the organized profession is endeavoring to find a solution for the economic and public relations problems involving adequate medical care.

Organized medicine has long been, not only willing, but anxious to work out a definite program which will be of mutual benefit to the profession and to the public it serves.

States having industrial centers and large populations, through their medical associations, have been promoting medical and hospital service plans for several years. California, Oregon, Washington, Michigan, New Jersey and various other states have long since inaugurated such plans with varying degrees of success. Smaller states, like Arizona, with few permanent industrial organizations large enough to support such medical and hospital plans, have been puzzled as to what to do. Our own Association has studied the matter and given it serious thought. A hospital plan was inaugurated under lay management and along fully approved lines with our association adding its approval, but so far this plan has marked time without making much progress.

Now that we have a large new population, especially in the war plants around Phoenix and Tucson, our central office receives numerous inquiries from these newcomers as to what medical and hospital plans they may join here. Without exception those inquiring have voiced an objection to any plan of compulsory membership, all ask for a voluntary plan.

A Congressman from another state recently addressed a letter to the Public Health League of California in which he stated, "I AM OPTIMISTIC ENOUGH TO BELIEVE THAT THE GREAT MAJORITY OF AMERICAN DOCTORS ARE FULLY COGNIZANT OF THE PROBLEM AND THAT THEY ARE MORE THAN WILLING, YES ANXIOUS, TO HELP SOLVE IT. A FEW SHORTSIGHTED ONES HAVE SOMETIMES GIVEN A DIFFERENT IMPRESSION, UNFORTUNATELY. IN HARMONY WITH THIS BELIEF, I AM FURTHER OF THE IMPRESSION THAT THE LEADERS IN THE MEDICAL PROFESSION THROUGHOUT THE COUNTRY SHOULD NOW BE TAKING ACTIVE STEPS TO PUT FORWARD A POSITIVE PROGRAM OF THEIR OWN, A PROGRAM THAT FRANKLY ACKNOWLEDGES THE DIFFICULTIES TO BE MET AND AS FRANKLY SETS FORTH, STEP BY STEP, WAYS AND MEANS OF MEETING THESE PROBLEMS THAT ARE IN HARMONY WITH SOUND MEDICAL ETHICS."

Our Committee on Medical Economics will again study this problem to see what Arizona may be able to work out along these lines. Suggestions from our membership as to prepaid hospital and sickness plans will be appreciated. If we can successfully put into operation a voluntary plan it may well serve to prevent legislation for compulsory governmental regulation of medicine and all of its allied activities.

O. E. Utzinger, M.D.

SELECTING THE MILITARY PILOT

JOSEPH G. LEE, M. D.*
Tucson, Arizona

THERE is a lively interest in aviation as now exists. The time has come when every physician should have some knowledge concerning the effect of flight on the human economy and be able intelligently to examine, advise, and treat those interested in flying.

When the question "What makes an aviator?" was put to a leading pilot he waved aside the idea that any special genius was his or contributed in any way to the making of any flier. "I think," he said, "anyone who can drive an automobile or motorcycle safely and efficiently ought to be able to fly an airplane in safety. Of course, in flying military, transport, and mail planes perhaps something more is needed, but I do not think the idea that it takes an unusual man to fly is at all sound." Asked to name definite qualities necessary, he stressed particularly mechanical judgment. "It is the meticulous care concerning route and meteorology and the intelligent handling of mechanical equipment that determines the pilot's length of usefulness in the air."

The experienced army flight surgeon often gets a "hunch" from his first appraisal of a candidate and may predict to himself as he follows the student through his training what kind of a flier he may become.

An individual may fly in spite of some physical defect, but it is inconceivable for a man to fly with a marked handicap of psychogenic origin, a loss of stability, or an improper coordination of mind and body.

Of course, the constitution of the flier must reveal no defects in all the essentials. The physical examination must be exacting, and is most difficult to pass, for he is subjected to extremes in flying. There can be no history of epilepsy, syphilis, respiratory disease, kidney disease or any ailment that may tend to be chronic and recur. The heart, lungs and nervous system must be sound and free from any defect. Often it is necessary for the military pilot to change direction suddenly at terrific speed. This may cause abdominal pooling of blood and brain anemia in one having a faulty circulatory system with the possibility that the ship might be out of control long enough for an unexplained crash to follow.

The eyes should be perfect or rendered so by a slight lens correction. There can be no color blindness, for keen vision is vital in determining terrain for landing, night flying, bombing, and in distinguishing military objectives at high altitudes. The glare of the sun from desert, water, and snow; rapid variations in oxygen tension; extremes in temperature and weather; and the roar of the motor all tend to aggravate any condition in the near-well individual and may even affect the normal pilot. This stress is tremendously increased during wartime flying.

Flying has a significant effect on the middle and inner ear. The magnitude of the ear problem in aviation may be judged from the fact that pilots suffer more frequently from disturbances of this organ than from all other flying diseases combined. The conditions of flight which most affect the ear are sudden changes of atmospheric pressure during ascent and descent, noise, and vibration. During this war, the atmospheric pressure factor is increasing in importance as a result of the increased climbing ability of combat planes while the noise and vibration are decreasing in importance because of advances in airplane design.

The present practice is to carefully select personnel; but following selection and training to keep them at the peak of efficiency for flight. The problems of maintenance of the pilot are in direct proportion to the care which is used in his selection.

From experience it is known that certain types of physiques may make for better fliers. Man is divided into three classes: the athletic, asthenic, and pyknic, or obese. Just as an external detail can betray subtle changes hidden deeply in the central nervous system, so may facial patterns and bodily conformations serve to guide us in drawing up our estimate of the applicant's constitutional capacity. Asthenic, in this sense, does not mean frail but rather the lean and wiry type.

Most of the excellent fliers are known to

*Captain, Inactive Reserve, Flight Surgeon, U. S. Army.

come from the athletic group. This group, as you would expect, consistently supplies the first-grade pilots that cannot be surpassed by those of any other nation.

Yet it is observed that some of the superlative fighter pilots are derived from the asthenic group. The more active glands of internal secretion of the man in this group perhaps speed up his metabolism or body processes. His reflexes and power of quick coordination are of the hair-trigger variety. He is often proficient in sports where nicety of judgment, finesse, and polished skill are required. He may turn out to be a crack pilot and an accomplished duellist just because he is a crank for perfection.

Men of the pyknic type are rather unsatisfactory. Their excess poundage is the visible



Official Photograph, Army Air Forces

No. 21978 S.A.M. Complex Coordination Test, above, tests for coordination of arms and legs. Lights flick on the board in different combinations. By coordinating movement of hands and feet on the joystick and rudder bar, respectively, the student brings red and green lights into straight lines. Above Milan Law, Miami, Fla., takes the test while Cpl. Jerome Kosseff, examiner, looks on at right. If the student wants to be a pilot, this contraption panics him. He is certain it is designed to test pilots alone and he is fearful that he will not do so well with it. By the time the would-be pilot has done what he considers badly on this test, he is his own greatest problem child.

sign of slower reflex activity. Many of them may become good pilots, but, as a general rule to which there are exceptions—they do not make top-notch fliers. In split-second emergencies they do not tend to do the right thing instinctively. It is not a question of intelligence or courage. Flying is usually not the field where they excel, though they do succeed in many professions.

It has been brought out that many of the pilots are descended from the Nordic race group. It so happens that pilots from this group are excellent aviators and are second to none of the other race groupings. The Nordic comes from a cold climate. He is blond, blue-eyed, and of athletic build as usually seen in the air service. There is often a piercing quality about his eyes, sometimes referred to indulgently as "eagle eye." That calm, hard, glacial gaze is a quality of psychological import. He usually conducts himself modestly but confidently, is emotionally stable, self-reliant, and of the "he-man" type.

The remainder or minority of the pilots are drawn from the Alpine and Mediterranean racial groups, and an occasional one from other groupings. Their fitness for war pilots varies though not always as we previously imagined. For example, Courtney states: "A common notion abroad before the war was that Japanese were poor fliers because 'they have no sense of balance; because their nervous reflexes are too slow.'" But a Japanese army flight surgeon reminded him that most balancing acts we used to see in vaudeville were given by Japanese. "In fact," the surgeon said, "we are endowed with certain racial virtues advantageous to flying. We are small and used to cramped quarters. We are agile, deft, strong. Our greatest difficulty is neither mental nor emotional, but defective vision, which is a national problem."

It is not believed that a certain racial group makes for better fliers. Indeed, it is most likely that Nature has made any particular geographical belt the breeding ground for birdmen. The flying type is perhaps present among them all. What is needed, though, is the soil or opportunities of education and proper flying training to develop them.

Military aviation is the field for the young man only. The most suitable ages are between 20 and 30, preferrably around 24. When one has learned to fly in youth, then, with constant increase of flying experience, he can safely carry on to middle age for civil aviation. Flying has become a reflex act with him now, and continued experience compensates, within limits, for the gradual deterioration of age. Of course, when any factor develops that impairs his powers of coordination it is then that he should wisely withdraw. The man in civil life who learns to fly at the age of 30 or later does so with the same difficulty as one would who takes up swimming at that period. He is more easily fatigued and must be given his flying instruction in small doses. His knowledge and aptitude in the later years tend toward the synthetic variety.

The pilot-selecting process from the viewpoint of personality study is of great importance. For example, the only son who has been pampered by his fond parents must always be the center of attraction to be happy. During flying training he may not do well because of the discipline, and may not get on with his fellow-fliers. On the other hand, the man who has been educated in the school of hard knocks and perhaps has been the leader of his gang as a boy, is to be looked on approvingly. Extraneous worries which have to be probed for are responsible for a number of wash-outs. It is by searching into his past life and learning how the student pilot conducted himself in all situations that one can foretell with any degree of certainty how he will act in the future.

In selecting the finished pilot for wartime combat, the temperament of the aviator is taken into consideration. For pursuit or attack aviation the flier must be aggressive with a calculated, reckless daring and a flair for action with an enemy. In bombardment aviation the more deliberate and calmly courageous pilot is chosen. He must fly level over his objective for a definite period in order to drop his bombs accurately, despite the strafing of the enemy.

Flying skill is always influenced by the degree of fear disturbing one's judgment. The pilot is forever pitting his skill against the elements; and, in wartime against his enemies. This constant combat, this game or risk can be the exhilarating recompense to those who become accomplished pilots. Eternal vigilance is the price necessary for survival.

As a sage once said: "As our thoughts are, so are we." Flying is an expression of thought. A definite type of young man is cut out for military aviation just as in any other line of endeavor. THE INHERITED QUALITIES OF THE MIND, TEMPERED BY EDUCATION AND EXPERIENCE, WITH THE SUM-TOTAL OF STUDIED FORESIGHT AND PRECAUTION, DETERMINE THE TRUE-FLYING TYPE.

It is a thrill indeed to watch with pride in your heart the finished pilot, poised besides his trim, fighter plane—sleek, and with the cold beauty of a barracuda. The pilot's thoughts fly upward. This knight of the air is a symbol of the everlasting appeal to the red-blooded and adventurous spirit of mankind.

NEW DEVELOPMENTS IN THE STUDY OF POLIOMYELITIS

DR. FLORENCE YOUNT
Prescott, Arizona

ALTHOUGH it is too late for this paper to have seasonal interest this year, the subject of anterior poliomyelitis becomes more interesting to all of us because of developments of the last few years, and also because Arizona is rarely free of new cases.

In the book, "Advances in Pediatrics," Horace L. Hodes of the Baltimore City Health Department and Johns Hopkins University, makes an interesting survey of new studies into the epidemiology of this disease.

For many years it was accepted that the virus spread by droplet infection, and once having made entry into the individual spread by way of the nerve endings. The basis for such a belief was (1) virus was found in the nasopharynx of children having poliomyelitis (2) the disease was produced in rhesus monkeys by instillation of the virus in the nose (3) was recovered in the olfactory bulbs before it was found in the rest of the nervous system—and section of the olfactory bulbs prevented its passage. During the last decade criticism of this experiment has been made on the basis that the field studied was only the nasopharynx and that only rhesus monkeys were used. Their reaction has been found to be quite different to that of chimpanzees and other monkeys.

In 1931 Levaditi, Kling and Legine produced typical poliomyelitis in cynomolgus monkeys by feeding them food heavily innoculated with the virus. Another monkey developed it from virus innoculated directly into a loop of intestine at operation. Vignec, Paul and Trask produced it by feeding monkeys the virus in bananas on three successive days. Howe and Bodian brought down two chimpanzees with it by stomach tube innoculations.

In 1937 Harmon stated that he failed to recover virus in the nasopharynx of twenty poliomylitis cases, but found it in the intestinal washings of 4 of the twenty. Vignec, Paul and Trask recovered virus from the stool of an infant with a light case on the 1st, 14th and 25th day of the disease. Sabin and Ward reported that they did not find virus in the nasal secretion of 22 patients tested, and none in the oral secretion of 20 of the 22. In another series they found virus in the stools of 50% of 58 children under the age of eight, and only 12% in older individuals. In 1939 Kramer and later Pizczek, in watching localized outbreaks of the disease, found virus in the stools of 3 out of 4 patients, having symptoms and in 6 of 38 healthy contacts.

Sabin and Ward autopsied eleven poliomyelitis patients with great care and they found (1) no virus in the olfactory bulb, or in the anterior portion of the brain in any case, (2) virus was nearly always found in the motor cortex, diencephalon, mesencephalon, medulla and pons, (3) the pharyngel mucosa, tonsils were positive in 4 out of 7 cases, the wall of the ileum was positive 3 times, colon once, and the contents of the descending colon was positive in all cases. (4) virus was found in the abdominal sympathetic plexus in one case and the nasal mucosa, salivary glands, cervical and mesenteric lymph glands were negative as well as the superior cervical sympathetic glands. Ward found it even more widespread in autopsies on cynomol-

Read before Yavapai County Medical Society.

gi monkeys and concluded from his studies that the virus was able to multiply in the intestinal tract.

One of the chief objects of research is, of course, to determine the manner in which poliomyelitis is spread in the community. Paul and Trask isolated the virus in the sewage of Charleston, N. C., during an epidemic in 1939. It was recovered at a pumping station above which the sewer of the isolation hospital joined the sewer from a heavily infected area. In Detroit, virus was recovered from a sewer trap in the basement of the isolation hospital three times during the height of the epidemic, and later when only a few patients were in the hospital the tests were negative. However, in Buffalo in 1939, while there were 330 cases in the city, no virus was obtained from the sewage.

In 1941 Paul and Trask isolated virus from flies trapped in a privy near Jasper, Alabama, that was used by members of families in which poliomyelitis was occurring. Sabin and Wood also isolated virus from flies trapped during an epidemic in Cleveland and again in Atlanta.

There is a great field for research and experimentation to see if the virus is spread by milk or water, swimming pools, flies and other insects.

Now let us turn to the field of treatment. In as much as we still have much to learn about the nature of this disease, we, of course, lack much that is desirable in the treatment. But the disease is so terrifying to the lay public and physician alike that we snatch at any reasonable suggestion that may benefit the patient.

In 1917, after isolating a strain of streptococcus which he believed produced the virus of anterior poliomyelitis, Dr. Rosenow of the Mayo Clinic, introduced a serum which he believed was very effective in an epidemic of a severe type that year, and twenty other epidemics in the United States and Cuba since that time. He claims for his serum that the mortality rate is cut eightfold when given before paralysis and fourfold afterward, and that residual paralysis is reduced fifteenfold when given early and tenfold, later. He further reports in the Proceedings of the Staff Meeting of the Mayo Clinic of October 20, 1943, that the euglobulin fraction of the poliomyelitis antistreptococcic serum was found diagnostic when employed in a cutaneous test. (92% of patients having the disease from 1 to 15 days gave an erythematous reaction of 5 sq. cm in from 5 to 10 minutes after the intradermal injection.) Rosenow is disappointed that his serum is not more widely used and appreciated.

The fact remains, however, that the use of serum is becoming less popular as the years go by. Disappointment over the results, or disastrous side reactions with its use contribute to the growing ill favor.

Toomey, writing in the Journal of Pediatrics for February, 1943, points out that Osler recommended heat many years ago in the treatment of poliomyelitis. In 1941, he used a 500-watt Tungsten lamp of the General Electric Co. on three different patients that had poliomyelitis involving the facial muscles. He found that after using the infra red lamp the patients could continue to use the muscles for about five minutes after the heat was off. As the patient's general condition improved, the interval lasted longer. He also applied the heat treatment to patients with facial paralysis from peripheral neuropathy from causes other than poliomyelitis (most of them were caused by dye or lead poisoning) and in these cases there was no response to the heat.

Simon Stone, also writing in the same Journal of Pediatrics, reported his cases treated at the Elliot Hospital in Manchester, N. H. His patients varied in age from 17 to 2½ and the hospital treatment varied from 18 days to 5 months. Twelve children made up the cases, and all but one had paralysis of varying severity. The one case that had no paralysis in the acute stage, showed early postural changes, weak tone and weakness of the flexors of the toes several months later. Dr. Simon gave all his patients from 10 to 50 mgms of thiamin chloride, either intravenously or intramuscularly, every day as long as there was any muscle tenderness. He also gave from 2 to 4 cc of wheat germ oil daily for its vitamin E content. In addition to vitamins, half his patients also received fever therapy, brought on by use of an inductotherapy cabinet, which elevated the temperature from 102 degrees to 105, and maintained it there from one to three hours. The children all tolerated the heat well. Care was taken to see that there was no dehydration. All patients were observed to have less pain

and rigidity in the back following the first treatment. Usually three or four treatments given every three days were sufficient to relieve the pain and rigidity, although one patient took nine. When the acute stage was passed, the muscle testing was done by a physiotherapist, and the patient was given passive and active exercises, pool therapy, and finally such braces or other supportive treatment as were needed. Although all but one had paralysis to some degree, none had contractures or deformities six months later. Dr. Simon felt that fever therapy was simple to give, and together with the vitamin therapy cut down materially on the length of time of hospitalizaion.

Like a brisk breeze on a sultry day, comes Sister Elizabeth Kenny of Australia with a new concept for treatment of this dread disease. This energetic, and oft-times belligerent lady, sponsors an entirely new concept about the pathological symptoms of the disease, in its acute phase. She admits to knowing nothing about the pathology of the disease, and has changed her terminology for her own concept of the basis for treatment several times, and has been the storm center of many conferences on many continents. Most of the argument is not over the value of the treatment she has worked out, but rather over the physiological principles behind it and over the interpretation of the terms she uses.

Sister Kenny has coined three new terms as the result of her years of observation of the disease. The first of these is "muscle spasm." We who have been taught for many years that poliomyelitis produces flaccid paralysis will be startled to hear her stress spasm. She has observed and demonstrated that in the early days of the disease the muscle involved will be in a tonic state of contraction, with fibrillary twitching and hyperirritability. These are most likely to be found in the muscles of the back and neck, the gastrocnemius, pectorals, muscles of respiration, the quadriceps and the biceps. The proponents of the Kenny treatment hold that if this spasm goes untreated there is permanent disability from atrophy of disuse.

The second term used by Sister Kenny is "muscle incoordination." This is described as two types. In one type, due to pain, or poor conduction, the spreading motor impulses intended for a certain muscle goes to another muscle or group of muscles. In the second type there is so much interference within the muscle itself there is ineffective contractions.

The third symptom Miss Kenny describes seems to be the one that provokes most of the arguments. She calls it "mental alienation" and describes it as the "inability to produce a voluntary purposeful movement in a muscle in spite of the fact that the nerve paths to the muscle are intact." The Minneapolis physicians working with Miss Kenny offer several theories as to its cause (1) a muscle pulled beyond its normal resting length by the opponent which is in spasm (2) a muscle becomes alienated when it attempts to move its spastic opponent and produces pain (3) the spasm in the affected muscle may be so severe that the braking action on the opposing muscle produces alienation (4) the disease may produce irritation or changes in the nervous system which do not destroy the cells and fibers but do interfere with the conduction power. Sister Kenny claims she can cure "toe drop" in 24 hours, by getting the spasm out of the gastrocnemius with hot packs and restoring "mental awareness" to the opposing group.

Relieving this pseudo-paralysis has produced some dramatic and wonderful results, but even the Kenny group cannot do much for the organic paralysis which follows the irreversible destruction of anterior horn cells. In these cases usually the entire extremity is involved instead of individual muscles.

Miss Kenny also undertakes what she calls "muscle analysis". This does not usually mean testing muscular strength—although she does that, too, in convalescent cases, but rather studying muscles and muscle groups for spasm, incoordination, and mental alienation. Miss Kenny also uses the term "muscle stimulation" and she does not mean electrical stimulation, but rather stimulation of the tendon insertion after gentle passive motion to direct the patient's attention to the muscular pull desired.

Helen Ross has listed five outstanding differences between the Kenny method and the usual method; (1) In Kenny technic the treatment is started immediately, whereas before, the patient was isolated 3 weeks before anything was done, (2) in Kenny technic "muscle analysis" is done at once to locate spasm instead of watching for

paralysis or flaccidity of the muscle; (3) In Kenny technic there is early movement of the joint through its complete range instead of immobilization of the entire limb and (4) in the Kenny treatment there is perfection of detail in muscle re-education which raises the usual basic ideas on re-education of muscles to a fine art, (5) with Kenny technic there is early activity and progression of weight-bearing without the employment of apparatus such as calipers and braces.

I believe every community should send nurses to the nearest center to learn all they can of the Kenny treatment. I also believe every doctor should have as part of his library Publication No. 40 of The National Foundation for Infantile Paralysis so he can direct the muscle re-education with complete understanding.

THE KENNY TREATMENT OF ANTERIOR POLIOMYELITIS IN ARIZONA
(Preliminary Report)

ELTON R. CHARVOZ, M. D.
Medical Director of the Arizona Crippled Children's Division
E. HENRY RUNNING, M. D.
Attending Pediatrician
JAMES LYTTON-SMITH, M. D.
Attending Orthopedic Surgeon

DURING the year 1943 there were 141 cases of poliomyelitis reported to the Crippled Children's Division. In our opinion this would constitute an epidemic when we consider the population and compare this with the fairly average year such as 1942 when there were 37 cases reported.

During 1943, however, we had at our disposal a new Crippled Children's Convalescence Home which was not available during the entire period of 1942 and in addition, during the major part of 1943 the Kenny method of treatment was carried out. During the first three months of the year of 1943 the complete treatment as outlined by Sister Kenny was not observed in detail but during the remainder of the year the treatments were given by Kenny trained technicians and the mehods of Sister Kenny were adhered to as closely as possible with few exceptions. As soon as a case was reported, the family and the attending physician were given instruction and treatment was carried out in the home for the first two weeks. In each instance the treatment over the first two weeks while in isolation, consisted only of hot packs. At the end of this isolation period most of the patients were brought into the Crippled Children Convalescence Home and treatment was continued there. Those cases in Maricopa County were usually given the first two weeks treatment at the County Hospital before being treated at the Convalescence Home.

It is extremely difficult to compare the Kenny method of treatment with the so-called standard treatment because it is a well known fact that epidemics vary not only in the number of affected patients but in the severity and extensiveness of involvement so that one cannot compare one year's severely involved cases with another year's mildly affected cases. The evaluation might be easier if every other case could be treated by the Kenny method but this usually will not be allowed by the parents because of the publicity given the Kenny method and also most often some type of Kenny treatment has been given before the patient is reported to us. Therefore, it is necessary to draw very broad conclusions as to the value of the Kenny treatment. We feel that the Kenny method is of value because of the following general facts based upon general observation and not scientific investigation:

1. The child is definitely more comfortable and happy.
2. Hospitalization is decreased.
3. Fewer deformities develop.
4. Fewer braces are necessary.
5. The child appears to have better coordination of muscles and better use of muscular power which has been recovered.

6. The child is in better condition for surgery.
7. The treatment can cause no harm.

FINALLY, the value of any new therapy is eventually weighed not by immediate enthusiasm but by gradual acceptance into standard therapy over a period of years and only can solve this question.

1942

COUNTIES	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Apache													0
Cochise						1				2			3
Coconino													0
Gila													0
Graham					1								1
Greenlee								1	1		1	3	6
Maricopa		1				2		1					4
Mohave													0
Navajo						1			1		2	1	5
Pima									2			1	3
Pinal						1	1	4					6
Santa Cruz													0
Yavapai													0
Yuma									2		2	4	8
Rivers (Pinal)					1								1
Poston (Yuma)													
Totals	0	1	0	0	2	5	1	6	6	2	5	9	37

1943

COUNTIES	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Apache									1				1
Cochise													0
Coconino								4	4	1			9
Gila						1	13	3	1				18
Graham								2	1				3
Greenlee					1	2	3			1	1		8
Maricopa	4	2	2	6	20	8	5	7	6	1	1	1	63
Mohave													0
Navajo								1	2				3
Pima								3	2				5
Pinal		1		1		1		1		2			6
Santa Cruz													0
Yavapai							2	2	1				5
Yuma				1				1	1	1			4
Rivers (Pinal)	1					2							3
Poston (Yuma)		3	3	6					1				13
Totals	5	6	5	14	21	14	23	24	20	6	2	1	141

The above two charts represent the number of cases of poliomyelitis reported to the Crippled Children's Division during the years 1942 and 1943, as well as the distribution of cases by Counties and months of onset. Approximately 60 per cent of the cases reported during the two years were treated under the Crippled Children's Division.

CANCER

E. PAYNE PALMER, M. D.
Phoenix
State Chairman American Society for the Control of Cancer, and the Cancer Committee of the Arizona State Medical Society

CANCER has advanced to second place, as a cause of death in the United States, being exceeded only by diseases of the circulatory system. This advance has been made at a steady pace during the past forty years. It is estimated that approximately 500,000 persons in the United States have cancer at the present time. A considerable number of those afflicted have not been recognized. Many of the tumors discovered by the host and suspected of being cancer have not been seen by a physician. Although the suspicion of cancer is present in the mind of the patient, only a few will have the temerity to ask if the tumor is a cancer. The average patient expects the worst and is prepared to accept the opinion of the examining physician.

One of the most unpleasant and delicate duties to confront a physician is the pronouncement of the existence of cancer. A blunt declaration of the diagnosis is not advisable, rather, considerable stress should be laid on the various encouraging aspects pertaining to his particular "tumor" and advocate the procedure most likely to offer the patient the safety he deserves. It should be done in such a manner that the patient will accept the verdict without question. Explain that the "tumor" is capable of changing its localized status and is certain to become generalized unless early appropriate treatment is instituted.

The family physician usually sees the cancer patient first but seldom undertakes the treatment of the cancer. The physician has a grave

responsibility in the cancer problem. He should constantly be on the lookout for early signs of cancer and endeavor to arrive at a correct diagnosis in suspicious cases. No cancer is so slight as to be considered insignificant and many cancers apparently hopelessly advanced are sometimes controlled, therefore a frank discussion of the outlook in any individual case is fraught with certain hazards. The physician should not hesitate to call in a consultant or to refer the case to one better qualified and properly equipped for the diagnosis and treatment of cancer.

The physician must also remember that cancer is quite frequent in the young. One of the most striking features of the illness rate from cancer is the very rapid increase during the latter half of life span. For white males the incidence rate for the older age group, seventy-five years and over, is more than one hundred times the rate for the age group of twenty to twenty-four years and more than two hundred times the rate during the first five years of life. The corresponding figures for white females being seventy-six and one hundred and ninety-one, respectively.

N. B. This article inaugurates a regular page on the subject of cancer to be prepared by selected specialists, in their respective line.

VOLUNTARY HEALTH PROTECTION FOR ALL

With ten per cent of America's citizens protected today by Blue Cross hospitalization, the nation-wide system of voluntary hospital insurance faces its gravest challenge and most fruitful opportunity during the coming year, according to C. Rufus Rorem, Ph.D., writing in the current issue of *Hospitals*, the journal of the American Hospital Association.

Dr. Rorem, director of the association's Hospital Service Plan Commission, contends that a net increase of four million enrollments during 1944 must be made "to impress the American people with the advantages and possibilities of voluntary health protection for the entire population."

It is up to the Blue Cross system to prove to employers, employees, hospital administrators and hospital trustees that its plan is "the best possible method by which they can finance adequate hospital care for the greatest possible number of those who need service," he points out.

MEDICAL AND SURGICAL RELIEF COMMITTEE of America

420 Lexington Ave., New York, N. Y.

January 1st, 1944

Dear Doctor:

There is a critical need for medical and surgical supplies that may lie hidden and forgotten in your office: discarded or tarnished instruments . . . surplus drugs . . . vitamins . . . infant foods. Collected, packaged, sent to the Medical and Surgical Relief Committee, they can play a vital role in its program of medical relief for the armed and civilian forces of the United Nations.

Surgical instruments and medicines are sought-after by physicians and pharmacist's mates of our Navy . . . are hungrily snatched by the medical corps of our Allies. The work of war-zone hospitals and welfare agencies is too often crippled by the lack of medical supplies. Community nurseries in this country, refugee camps abroad cry out for vitamins and baby foods for their ill-nourished charges.

In the pages of this journal you may have read about the Committee. It has supplied over 900 sub-hunting and patrolling ships of the Navy with emergency medical kits; equipped battledressing stations on battleships, destroyers, and cruisers. The Committee's roll-call of medical requests—not one of which has been turned away—reads like a world geography: the Fighting French in North Africa and Tahiti; the Royal Norwegians in Canada and Iceland; the West Indies; South and Central Africa; China; India; Great Britain; Yugoslavia; Syria; Russia; Alaska and, of course, the United States.

To meet the demands that pour into headquarters, the Committee needs all types of instruments, especially clamps, scalpels, forceps, and all kinds of drugs from iodine to sulfa products. By contributing what you can spare, you will help speed another shipment of sorely-needed medical aid.

Very sincerely yours,

Joseph Peter Hoguet, M. D.
Medical Director

ARIZONA MEDICINE

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Editorials

Dan L. Mahoney, M. D.

President-Elect
Arizona Medical Association

The Arizona Medical Association has Dan L. Mahoney, M. D., as President-Elect to guide the activities of the Association through the coming year. A wise choice was made in the selection of Dr. Mahoney to this important office.

Dr. Mahoney was born at Hancock, Michigan, but his early schooling was obtained at Virginia, Minnesota, where he graduated from high school. His pre-medical training was acquired at the University of Minnesota but he completed his medical course at the St. Louis University in 1916. He interned at Alexian Brothers' Hospital, St. Louis, during 1916 and 1917.

Coming to Arizona, Dr. Mahoney served as Clinical Director of the United States Veterans' Hospital at Tucson from 1920 to 1925, having served as First Lieutenant in the Army M. C. from March, 1918 to March, 1919.

Following his service with the Veterans' Hospital at Tucson, Dr. Mahoney entered private practice at that city in 1925, specializing in diseases of the chest. He has built up an enviable reputation both as a physician and as an outstanding citizen.

Married to Minerva Ann Ward of Bryant, South Dakota in November of 1920, six children bless the Mahoney home.

Dr. Mahoney is a Fellow of the American Medical Association and of the American College of Chest Physicians. He is a member, of course, of the Pima County Medical Society and serves on the staff of St. Mary's Hospital and Sanatorium. He is also affiliated with the Elks and Knights of Columbus organizations.

Dr. Mahoney served as Vice-President of the Arizona Medical Association and followed this term with two terms as Councilor for the Southern District before elevated to the office of President-Elect. During his several years service, in these capacities, on the Council of the State Association, Dr. Mahoney has been most faithful to all his offices, missing but one session of the Council due to illness. His years of service in these offices, his devout attention to duty, his spirit of cooperation and ready humor, richly qualify Dr. Mahoney for the office of President which he will assume on April 14, 1944 at the forthcoming Annual Meeting.

Our Line of Defense

To borrow from a rather recent phrase, the Medical Profession's "front line of defense" is the Murray-Wagner-Dingell Bill. To date, more discussion has been aroused by the Soldier's Maternity Bill, but it is beginning to look like a lost cause as all attempts to change its obnoxious provisions have met a stone wall. We are told that Congress is not to blame for it. That it is a brain child of the Children's Bureau, starting off with a few hundred thousand dollars, and then further appropriations were secured by adding riders to other bills, and at no time did this bill ever pass through the usual regular routine of being reported out of a committee. We have been further assured that it is purely an emergency measure, to be junked at the end of the war. We are unable to accept this last promise, but on the other hand are fully convinced that it is merely a wedge or a foot in the door for further socialized medical procedure after the war. What organized medicine dislikes mostly about this bill was the manner in which it was perpetrated. When the nation was plunged in war the Government was faced with the need of a great army of medical men. Leading medical men of the country were called to Washington. Their decision was the Procurement and Assignment of Physician's Organization. In 1939 there were 1200 commissioned medical officers in our Armed Forces. Today there are 42,000.

THE AMERICAN MEDICAL PROFESSION MAY POINT WITH PRIDE TO THIS ACCOMPLISHMENT. There has been no compulsory legislation to draft doctors into the Army. A very small percentage of these doctors could have been drafted under the Selective Service Act. Most of them are either pre-Pearl Harbor fathers or above the draft age. What other organization in this Nation can produce anything that even approaches such claims to fame? An example of the manner in which the American people respond to the call for volunteers occurred this summer when the Armed Forces decided they could use Women Physicians in the Army and called for volunteers stating that they could use 500. At the end of six months, thirty-eight had answered this call.

When the Government decided to provide obstetric care for their enlisted men the Medical Profession was not consulted. After the plan was formulated they were asked to approve it. When the State and County Societies began asking quesions, the plan was put in operation and announced through the Public Press, and then the Medical Societies were asked again whether they were going to approve it. The result was that the Profession was on the spot. Many were in favor of continuing to openly condemn it. Others felt it their patriotic duty to take care of the soldier's wives. Others feared unfavorable public reaction to the Medical Profession in refusing to cooperate with the Government during war. The end result has been that at present the plan is in operation in every state in the Union except North Dakota. But every state accepted it under protest, hoping that their pleas for amending the bill will be answered.

The Profession is asking, unanimously, that the soldier's wife be paid a direct allotment for pregnancy, instead of accepting a fixed fee from the government direct to the doctor. When the representative of the Children's Bureau was asked at the recent Conference of State Secretaries why direct allotments could not be made, his answer was that it would probably require thirty-six million dollars, instead of the eighteen million which has been appropriated. There is a well established rule in this country that you get what you pay for. So the soldier's wives will get eighteen million dollars worth of service instead of thirty-six million dollars worth. In answer to the above reply, what is eighteen million dollars to a nation when it is spending hundreds of billions of dollars to win this war! Why should the Government chisel on the Medical Profession? They did not chisel on gardeners and other common laborers when they put them to work in defense plants at a dollar an hour. And to further demonstrate their near-sightedness, at the very time they are struggling to build an Army, and encountering so much physical unfitness, at the same time they are chiseling on the unborn millions. Another objection to outright allotments was that the women would buy fur coats instead of paying their doctor bills. If his were the case why are not the regular allotments paid to the wives, not being paid direct to the rent landlords and groeery stores? The Soldier's Maternity bill is an open sore to the Medical Profession, and it is a wound which was inflicted before they had a chance to raise their hands in self defense.

And now as we turn our attention to the Murray - Wagner - Dingell Bill, almost eight months have elapsed since it was introduced in Congress. And we are still in very much of a quandary as to how we should combat it. After listening to the various comments and opinions throughout the country it seems as if the Profession will have to "take it to the people." And right away one wonders how an electorate, which often is most complacent, can be aroused. At the recent Secretarial Conference, President - Elect of the A. M. A., Dr. Kretschmer stated that the doctors should spend 2 hours out of their day explaining the dangers of socialized medicine to their patients. This suggestion was not received with much enthusiasm. How can the doctor who is seeing forty and fifty patiens a day spend any time talking to his patients about socialized medicine, many of whom are just as busy as he is? They come for relief of their aches and pains and not to talk politics. However, through the haze and fog, there is a glimmer of light. And the vulnerable point of attack, is the vulnerable point of every American,—his pocketbook. When the American laborer finds out that the Murray-Wagner-Dingell proposes to take six percent of his wages, and the employer a similar sum, a complacent electorate will very probably be aroused.

The following article is reprinted from the *American Journal of Digestive Diseases.*

It was published as an Editorial entitled "Do You Agree." It borders on both the frivolous and the profound. But wisdom lurks in its lines:

Two things on the part of a doctor destroy morale in the patient,—rubber heels and whispering in the sick room.

Do not hand a diet list to an accomplished gourmand unless you wish to make him sick.

If you think you have the diagnosis but are not quite sure, just put "pseudo' in front of it, and you will probably be correct.

Vomiting in a person who never vomits usually means organic disease, but in nervous people it often is induced by tickling the palate.

Belching which gives comfort is not complained of, but air swallowers make a big story to call attention to their habit.

A bitter taste in the mouth is a sign of a nervous individual but a salty taste (without blood) means fatigue.

A bad breath seldom facilitates diagnosis but there is a smell of malignancy in the gastric contents of persons with cancer of the stomach.

Play down focal infection to some extent, but do not overlook a dead or abscessed tooth.

Fastidious persons call themselves constipated when the daily stools are a little small because they judge the efficiency of their excretory function by the sensation of sphincteric dilatation.

Some people use the word "indigestion" when they mean constipation.

Many persons have used rather drastic purgatives all their lives without developing symptoms of indigestion.

A few persons otherwise mentally normal claim that their bowels never move.

Persons who usually have three evacuations daily think they are constipated if they have only two.

Persons whose bowels move only once a week seldom complain of constipation.

Diarrheas which last for years are harmless and are due to intestinal hurry, the colon not having time to absorb much water from the food mass.

The patient who is utterly unable to describe how he feels, feels very badly.

A woman who smiles as she describes her pain is always hysterical.

A carefully taken history is of greater value in diagnosing peptic ulcer than a careless fluoroscopic examination.

Appendicitis can be diagnosed only by the man who has his hand on the abdomen while the pain is there.

In very chronic pain in the right lower quadrant of the abdomen, the appendix seldom is responsible.

The commonest cause of abdominal distress is constipation.

The most serious cases are those with the briefest complaints.

The less you find wrong with a patient, the longer must be your explanation of his symptoms.

The hypersensitive patient has a moist eye, and he lowers his brows when you raise your voice.

The commonest cause of abdominal rigidity is ticklishness.

The terminal stage of cardio-vascular-renal disease without edema, shows as rapid weight loss as cancer.

Pyorrhea seldom causes a symptom-producing gastritis.

Many physicians still get good results from long prescriptions.

One sometimes meets a patient who does not need a sedative

The patient who boasts of his health may merely be depressed.

The woman who cannot make a single decision becomes a difficult patient.

Looking at the patient's tongue has come back into vogue, but you have to be good to get away with it

Today the scale salts often give more dramatic results than the vitamins.

Many a man thinks his xiphoid process is a tumor.

The first interview will tell you whose medical column the patient reads.

There is no greater builder of confidence than an admission of ignorance.

A physician gets closest to his patient on the day he himself feels ill.

The older a doctor gets the less he tells his patients.

Intestinal obstruction in August is likely to be due to eating corn.

Renal stone is the only disease that makes patients turn somersalts in bed.

The commonest causes of worry are fear of illness and lack of money.

Some of the healthiest individuals eat the most monotonous diets.

Doctors are just as busy as before vitamins.

It isn't necessary to be a mind-reader to practice medicine, but it helps.

The most hopeless patient is the gelatinous child of albuminous parents.

The most ancient and the most modern vogue in medicine is psychotherapy.

Gastroenterology might have succeeded earlier if its nomenclature had been patterned after the ponderous style of dermatology.

A good surgeon is a physician who can operate but a good physician doesn't need to.

We would understand nature if we understood the exceptions to the rules.

Patients appreciate helpful suggestions more than health inventories.

The findings of the Freudians are shocking if true, and thus far no one has offered satisfactory rebuttal testimony.

The old circle,—we hear now that if the world is to be scientifically fed, it must be sociologically revamped in advance, but some of us would prefer to remain lacking in certain nutritive elements than become robots in a global bureaucracy. Food has always been used for nourishment, but it could also be used for pressure politics.

In spite of the marvels of hormones, vitamins and chemotherapy, the greatest marvel remains the fact that the human body is not radically affected in its morphology or its natural history by any biological substance that can be put into it.

The millions of volunteer donors who have visited American Red Cross blood donor centers have helped save the lives of great numbers of our soldiers and sailors. These centers are equipped with up-to-the-minute scientific apparatus, and their operation is financed from Red Cross funds. Support the 1944 Red Cross War Fund and thereby help save the lives of the boys at the front.

Quarterly Review of Medicine

This new medical journal, the first issue of which appeared in November, may be the answer to the busy Internist. It will be published every three months, and will report progress in the fields of internal medicine, gastroenterology, and cardiology. The following nationally known physicians comprise the Edtorial Board:

FRANCIS G. BLAKE, M. D.
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Mayo Clinic

Every possible source of the most recent methods in diagnosis and treatment is being combed from the medical literature of the country and the material is condensed and abstracted so that the information can be given in shortest possible terms. The print is large type and easy to read. It would seem that such a medical service could become invaluable. Three articles from the first issue are republished here for examples:

RHEUMATIC FEVER: ITS INCIDENCE IN THE SOUTHWESTERN STATES

S. J. McCLENDON
San Diego, California

California and West. Medicine., 59-114-16, Aug., 1943

It has frequently been stated in medical literature that rheumatic fever is most frequent and most severe in temperate and cold climates, "wherever the weather is cold, wet and changeable." Rheumatic fever is of great importance to pediatricians, cardiologists and educators alike, because rheumatic carditis is 'almost the only form of chronic heart disease in persons under 14 years of age, with the exception of congenital heart disease." Little is known, however, about its true incidence in the United States, because in most states it is not a reportable disease. The author has seen 112 cases of proved rheumatic fever in his private practice in San Diego, and has found records of 83 other cases in one of the private hospitals of this city. All these patients were children from 3 to 15 years of age, and all were natives of southern California or southwestern Arizona, and had not lived outside this area. In the author's series of 112 private patients, the largest number were from 6 to 12 years of age. The onset of the disease was in the spring in 55 cases, in the summer in 22, and in the fall and winter in 45. In some the attack was acute onset with polyarthritis, carditis and high fever; in others the onset was mild and insidious with joint pains and low-grade fever, the cardiac symptoms developing later. In some cases the course of the disease was short and recovery was complete with normal cardiac findings after the attack In most cases, however, there was evidence of permanent valvular heart disease. Such symptoms as fever, poor appetite, pallor and pains in joints and muscles in addition to symptoms of cardiac failure persisted for several months in the average case. Later, the patient's general condition improved with return of appetite and gain in weight, but the cardiac signs and symptoms persisted, and in most instances there was acute exacerbations of all symptoms, with further damage to the heart resulting. In the author's series, chorea and rheumatic nodules were rarely observed. The author's analysis of these cases together with the findings in 83 hospitals cases leads to the following conclusions: Acute rheumatic fever and rheumatic carditis are found more frequently in southern California than is generally supposed or indicated by reports of others. Systematic reporting of all such cases, according to the law making the disease reportable, will make possible a more accurate determination of the incidence of the disease. The incidence and severity of the cardiac complications were approximately the same in the author's series of cases as in colder and more severe climates. Repeated respiratory and throat infections "of a streptoccic type" precede the onset of each acute attack as a rule. No evidence was found that removal of tonsils and adenoids diminishes the incidence of the disease or acts as a prophylaxis of recurrent attacks. In the southern California area, poor economic conditions and poor housing were not found to be contributory factors in the etiology of rheumatic fever.

—*Quarterly Review of Medicine*, Nov., 1943.

MANAGEMENT OF CARDIAC ARRHYTHMIAS

ALFRED W. HARRIS
Dallas, Texas

Texas State J. Med., 39: 293-97, Sept., 1943

Most of the cardiac arrhythmias can be differentiated at the bedside by clinical means. The electrocardiographic tracing is the final authority. A routine tracing may be of little help, whereas one made before and during carotid sinus pressure may tell the whole story. Should carotid sinus pressure be ineffective, utilization of other vagal tricks such as ocular pressure holding the breath at the end of deep inspiration, straining at the end of deep inspiration with the glottis closed, or lying across the bed with the head hanging over the side of the bed may be substituted. In the case of extrasystoles, removal of the precipitating factors constitutes the most effective treatment. Reassurance, a rational regime of daily routine, and mild psychotherapy, plus occasional use of bromides or barbiturates, will often be effective. Tea, coffee, tobacco, alcohol and certain other foods may act as a trigger mechanism, and if so should be restricted. In refractory cases, quinidine in doses of 3 to 5 grains three to four times a day until bedtime may be recommended. If this fails, partial digitalization with continuance of maintenance doses of digitalis will abolish the irregularity.

In cases of parexysmal auricular tachycardia no treatment is required if the attacks are short and infrequent. In cases with prolonged attacks six remedies are available including carotid sinus pressure, sedation, administration of an emetic, or apomorphine, the latter being too drastic in most cases. If these simpler methods fail, quinidine sulfate in relatively large doses by mouth, every one and one-half to two hours until a dose of 30 to 50 grains has been given may be utilized. A 2 grain test or sensitivity dose is first given. In cases where this is not successful mecholyl may be tried, but only 12 to 24 hours after quinidine therapy, as the two drugs are antagonistic. Mecholyl is dangerously toxic and must be used with caution and never in cases of asthma, angina pectoris, hyperthyroidism, or recently healed myocardial infarction The precautions necessary in administration of mecholyl are described in details. If all of these measures fail to break the

tachycardia, rapid digitalization may occasionally stop the arrhythmia. Constant digitalization is best for frequently recurring attacks, or administration of quinidine in 5 grain doses three times a day, increased daily to the effectual dose, which may be as high as 40 to 50 grains a day.

In paroxysmal ventricular tachycardia, quinidine is usually given every one and one-half to two hours in increasing dosage with electrocardiographic control available. In some cases intramuscular or intravenous quinidine may be required In some cases of standstill or collapse, injection of atropine may prove effective. For that reason, before intravenous quinidine is given, a second syringe with atropine should be prepared. The worth of prophylactic quinidine following infarction has not been proved. Paroxysmal auricular flutter can usually be broken with progressive doses of quinidine. In permanent flutter, the patient is digitalized and, if fibrillation occurs, digitalis is discontinued when normal rhythm will result. Where fibrillation does not occur, the block should be intensified to 4:1 or 6:1 and then quinidine is given in progressive doses. The ventricular rate should be kept down by daily maintenance doses of digitalis.

The usual mode of therapy for auricular fiberllation is adequate digitalization. The indications and contraindications for the use of quinidine in these cases are enumerated. In cases of long standing quinidine is contraindicated. The routines employed in various hospitals are described. Where paroxysmal auricular fibrillation is present or early permanent fibrillation is to be broken, the author uses the Fahr method of treatment. In complete heart-block with the Adams-Stokes attacks no treatment is required. In the presence of congestive failure and heart block digitalis should be given. Digitalis will prevent syncopal attacks, by completing the block. The author cautions against the intracardiac use of adrenalin. 12 references. —*Quarterly Review of Med., Nov.*, 1943

EPIDEMIC POLIOMYELITIS

LUKE W. HUNT
Oklahoma City, Okla.

J. Oklahoma M. A. 36:323-28, Aug., 1943

This report is based on a study of 368 patients the majority of whom were treated at the John McCormic Institute for Infectious Diseases. The author discusses initial symptoms, important physical findings, the frequency and extent of the paralysis, some epidemiological phases of the disease, the clinical pathologic character, differential diagnosis and treatment. Early symptoms resemble those of any acute infections diseases of childhood. The initial fever usually lasts from four to seven days. Aside from the fever, the picture of the individual case was colored by the particular set of organs chiefly involved. In this series partial paralysis was much more common than total paralysis. 295 patients showed some improvement during their stay in the hospital; seven showed no paralysis on discharge. In six cases paralysis did not develop. In 29 cases there was no improvement and 33 patients died. Autopsies were made in 13 cases. Differential diagnosis must be made from epidemic or tuberculous meningitis and after paralysis has developed from post-dipheritic paralysis, and from other forms of neuritis such as those due to alcohol, arsenic and lead, as well as from hysteria.

There are as yet no specific remedies in general use for the prevention of this disease. Some writers recommended injection of 10 to 20 cc. of pooled convalescent serum into menaced children. In the time of epidemic, segregation of individuals should be instituted and congested places should be avoided. Personal contacts such as kissing and handshaking should be omitted. Pets should not be handled and persons should keep as physically fit as possible. Swimming and tonsillectomies should be banned for the duration of the epidemic. Cleanliness of person and environment are important. Nasal antispetics are not advised.

Convalescent serum has been used extensively in treatment of the disease and in 52 cases in the present series its use was followed by marked improvement; 20 to 30 cc. were given intraspinally and 60 cc. intravenously. A few received a second administration. Pooled convalescnt serum is more potent. It is generally agreed that the hot pack treatment is an advance in the treatment of poliomyeliis and it is begun immediately after diagnosis has been made. It is directed first to overcoming pain and muscle spasm. Muscle re-education is then instituted to develop mental awareness of alientated muscles and re-establish muscle coordination. Early relief of spasm makes it possible to begin muscle re-education much earlier than by the previous methods of treatment. The treatment must be under the direction of specially trained nurses and physicians. Tables show the frequency of various symptoms, the extent of paralysis, the time of onset of paralysis, the incidence of the disease with respect to age and the seasonal incidence.

—*Quarterly Review of Medicine, Nov.*, 1943.

Goodyear Aircraft Corporation

Arizona Division
Litchfield Park, Arizona

February 14, 1944

Arizona Medical Association
Phoenix, Arizona

Gentlemen:

This is to advise you that Goodyear Aircraft Corporation, Arizona Division, Litchfield Park, Arizona, is operating under a self-rating Ex-medical Policy with the Industrial Commission of Arizona.

Liabilities incurred under this plan because of Industrial accidents to employees of Goodyear Aircraft Corporation will be paid by the Goodyear Aircraft Corporation and not the Industrial Commission.

In accordance with the Rules of Procedure before the Industrial Commission of Arizona, effective January 1, 1943, we quote paragraph 59:

"EMPLOYEES MUST FOLLOW TREATMENT: — Every employee must submit to and follow the treatment and directions of the attending physician employed by his employer, or where the employer is insured for medical treatment by the employer's insurance carrier. An injured employee will not be permitted to

voluntarily change from one hospital to another, or from one doctor to another, without the authorization of the Commission."

The Goodyear Aircraft Corporation assumes no responsibility for the payment of professional services on Industrial Cases where physicians accept cases without proper authorization from the Company Doctor or the Industrial Commission.

Physicians administering professional services to any employee of Goodyear Aircraft Corporation because of industrial accidents must submit a copy of their Initial Physician's Report and any correspondence or reports which may result relative to said accident to the Goodyear Aireraf Corporation. All invoices, covering said services, must be submitted, in duplicate, to Goodyear Aircraft Corporation, Attention, F. R. Vihel, Litchfield Park, Arizona.

(Signed) F. R. Vihel

War Manpower Commission

What are the implications of waivers for known physical defects which physicians sign upon being appointed for limited service in the Army Medical Corps?

The answer to this recurent question is clarified in a recent opinion on the subject made by the Office of The Judge Advocate General of the Army. The opinion, released by the Procurement and Assignment Service of the War Manpower Commission, is as follows:

"Response is made to your oral inquiry whether acknowledgment, on the accompanying form, of existing physical defects would preclude a person from thereafter claiming benefits to which he would otherwise be entitled on account of the service connected aggravation of such defects. As to the defects acknowledged, the execution of such an instrument merely provides additional evidence of their existence, and to that extent would operate to preclude the person involved from thereafter claiming benefits on account of them. It is the opinion of this office, however, that the mentioned form does not purport to be a waiver of possible future benefits to which the individual might become entitled by reason of any service-connected aggravation of such defects, and would not operate to deprive the individual of any possible benefits on account of such aggravation."

OCD ANNOUNCES INCREASE IN HOSPITAL PAY RATE FOR EMS PATIENTS IN DISASTER

Hospitals caring for civilian patients who have been injured by enemy action will now receive payment at a rate of $4.25 a day through the U. S. Public Health Service, according to Circular, General Series No. 12, issued November 10, by the Office of Civilian Defense.

The Circular announces an agreement between the Federal Security Agency and the Office of Civilian Defense, amending the original "Agreement Regarding Temporary Hospitalization and Medical Care Neeessitated by Enemy Action to Civilians," under which the rate paid to hospitals was $3.75. The change follows the recent action of the Federal Board of Hospitalization in raising the per diem rate in all government hospitals from $3.75 to $4.25. The new rate applies to both Casualty Receiving Hospitals and Emergency Base Hospitals.

Two other amendments to the original agreement were also announced. In view of the increasing shortages of nurses and the neeessity for obtaining commitments from individual nurses to serve at Emergency Base Hospitals, it has now been arranged for the Public Health Service to pay the salaries of a limited number of graduate nurses who will supplement the staffs of Emergency Base Hospitals if and when they are activated. The Public Health Service will also pay patients to Emergeney Base Hospitals when the evacuation of such patients is ordered by State Chiefs of Emergency Medical Service. It is explained that the use of Federal funds will expedite such transportation under the stress of emergency conditions.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION

Excellent progress was made during 1943 in the enactment by state legislatures of premarital, prenatal, prostitution and venereal disease control laws and amendments, Dr. Walter Clarke, Executive Director of the American Social Hygiene Assoeiation, said today in announcing the results of a legislative survey just completed by the Association's Division of Legal and Proteetive Services.

"These various laws have the purpose," Dr.

Clarke said, "either of protecting mothers and babies against syphilis, of enabling communities to take effective steps in the repression of prostitution, or of facilitating the finding, reporting, treatment and quarantine of infectious venereal diseases. It is encouraging that such solid progress has been made in this field even in the midst of war. Experience has proved that such legislation is an essential factor in maintaining a sound, smoothly functioning venereal disease control program."

The Association's survey shows that during 1943 the following social hygiene legislation was passed:

In Alabama a unique law was adopted which requires all inhabitants of the state between the ages of 14 and 50 to have an approved blood test for syphilis. An appropriation of $75,000 was provided to carry out provisions of the law.

The states of Indiana, Nebraska, Missouri and Wyoming passed premarital examination laws requiring examination by the physician of both applicants for a marriage license including a blood test for syphilis as a prerequisite for a marriage license. Idaho, Georgia, Kansas and Nebraska adopted prenatal examination laws for syphilis. This means that there are now 30 states which have premarital laws for the protection of marriage from syphilis and 30 states which have prenatal laws protecting babies from syphilis. The first premarital examination law was passed in May, 1935, by Connecticut and the states of New York and Rhode Island enacted the first prenatal examination laws in 1938.

Arkansas, Florida, Georgia, Oklahoma, Tennessee, Texas and West Virgina adopted new laws for the repression of prostitution, making a total of 19 states which now have adequate legislation against most of the aspects of prostitution. Ten other states have good legislation against prostitution with the exception of those provisions concerning the activities of customers of prostitutes.

The following states strengthened their venereal disease control laws, particularly in relation to the reporting, treatment, quarantine, follow up and finding of persons with an infectious veneral disease: Connecticut, Florida, Indiana, Maine, Maryland, Montana, New Mexico, North Dakota, Oklahoma, Oregon, Tennessee, Vermont and West Virginia.

The premarital examination laws of California, Connecticut, Illinois, Iowa, Massachusetts, and Vermont were amended by the legislatures to obtain more smooth operation. An interesting feature of the Massachusetts premarital law, as amended, permits marriage of applicants under certain conditions even though one or both may have syphilis in an infectious stage. The physician who discovers evidence of syphilis must inform both applicants to the marriage of the evidence and nature of such disease.

Two laws of special interest in this field were passed by the Florida legislature. One permits the revocation of a license of a boarding house, rooming house, hotel and restaurant for any violation of the laws against prostitution, lewdness or assignation. The second statute requires all persons rejected or deferred from military service who are infected with venereal disease to report to the venereal disease clinics operated by the Florida State Board of Health or to take treatment from a private physician or at public expense.

In Oklahoma, the Governor signed H. B. 37 on March 18, 1943, relating to the examination and treatment of persons confined in public or private insitutions, or any person arrested by lawful warrant for vagrancy, prostitution or other sex crimes for the purpose of determining if they are infected with syphilis or gonorrhea.

1944 RED CROSS WAR FUND

When bombs fall there is no time to send help half way around the world. When a badly wounded fighting man needs a transfusion, it is too late to begin looking for a blood donor or find a nurse to care for him. When a lonely soldier learns of trouble at home, he needs help —immediately.

The American Red Cross provides that help wherever and whenever the need arises. A continuous procession of blood donors must be maintained, nurses must be recruited for the Army and Navy, trained Red Cross workers and supplies must be sent to camps, hospitals and foreign theaters of operation the world over.

When a train crash leaves scores injured, when flood engulfs a town, when epidemic strikes, delay may cost lives. Red Cross disas-

ter relief and medical supplies, held in readiness for such emergencies, plus trained workers to rescue and assist victims and help in their rehabilitation, will prevent delay and thus save many lives.

To fulfill its many obligations to the armed forces and our people, the American Red Cross needs your help. During 1944 it must supply some 5,000,000 blood donations. Each month 2,500 nurses must be recruited for the Army and Navy. Red Cross field directors and other trained personnel must be stationed at military and naval posts and hospitals to help our fighting men and their families when personal trouble brews, a task in which the Red Cross chapter on the home front ably does its share.

At home the Red Cross must continue to maintain a state of alert. Disasters must be met as they occur. Nurse's aides and first aiders must be trained and other educational projects continued. Food parcels for distribution to prisoners of war must be packed, surgical dressings made and the thousand and one details of administrating a far-flung, busy organization must be attended.

All activities of the American Red Cross are financed by voluntary gifts and contributions. During March, designated by President Roosevelt as Red Cross Month, the American Red Cross must raise its 1944 War Fund of unprecedented size to meet unprecedented needs. Your contribution will assure maintenance of all Red Cross services and thus indirectly help save many a life. Let's give!

RHODE ISLAND PLANS HOSPITALIZATION PROGRAM

Adequate medical care for all persons in the State—regardless of ability to pay—through a State-supervised hospitalization program that utilizes existing private facilities is seen as the answer to proposed Federal domination of the hospital insurance field, in the opinion of Rhode Island's Governor J. Howard McGrath. His stand is told in the current issue of *Hospitals*, the journal of the American Hospital Association.

Now awaiting incorporation into a non-partisan bill for submission to the State legislature, Governor McGrath's proposal emphasizes the following points: (1) Utilization of existing facilities wherever possible, to avoid expensive creation of new or duplicating facilities; (2) compliance with the principles and practices of professions and institutions which would share in the program; (3) the broadest possible coverage, seeking ultimately to bring all residents of the State under the plan's protection; (4) encouragement of joint provision of needed funds by employer and employee, with minimum State participation, and (5) "avoidance of Federal or State domination and control."

In asking the legislature to give serious consideration to the hospitalization program, Governor McGrath said: "If the State, our voluntary hospitals and the medical profession . . . join with labor and with industry in exercising vision, energy and determination to achieve the broad purpose of such a program, and attempt to reach a satisfactory formula for effecting it, we will eliminate the need or the danger of a Federal program in this field."

The Rhode Island governor's action followed a series of conferences between the administrator of the State Division of Public Health, the Rhode Island Hospital Service Corporation officials, members of the medical profession, and representatives of the Hospital Association of Rhode Island.

Commenting editorially on Governor McGrath's plan, the influential *Providence Journal* said: "This method of handling health insurance is far superior to that proposed in the Wagner Bill now pending in Congress."

HOSPITAL ADMISSION TRENDS ANALYZED

Bellevue Hospital patients today are older persons, their average stay is longer, and the hospital mortality rate is significantly lower than was the case at the turn of the century, according to a statistical analysis of admission trends at Bellevue Hospital, New York City, published in the current issue of *Hospitals*, the journal of the American Hospital Association.

Basing their conclusion on analysis of two five-year periods (1923-1927 and 1935-1939), Beatrice Kresky, M. S., and H. M. C. Luykx, M. S., report an increase of nearly fifty per cent in the total number of admissions to Bellevue, despite a decrease of fourteen per cent in the population of the borough of Manhatten, and an increase of only twenty-five per cent in the city of New York during the same period.

Despite this increase in admissions, hospital mortality has shown a sharp decline. Meanwhile, the average age of patients increased more markedly than the figure for population gains, with a significant gain in the number of cases treated for diseases of the cardiovascular system and diseases of nutrition and endocrine system. Correspondingly, there was a decline in the proportion of patients suffering from rheumatic heart, infectious diseases, and diseases of the central nervous system.

The study, according to the authors, suggests the importance of making adequate plans for further changes in admission trends.

BRITISH NAVAL NURSES TOUGH BUT OH SO GENTLE

Britain's Naval Nurses combine the tough-fibered nonchalance of the professional fighting man with the healing touch of their more sheltered confreres in just the right proportions to have won them fame through exploits that mark their path around the world to many advanced fronts in today's global warfare.

Their heroism under fire, patience in the face of almost insurmonntable difficulties, and dogged determination to help the wounded and he sick wherever Britain's fighting forces may call them, are pictured in the current issue of *Hospitals*, the journal of the American Hospital Association.

Representing a service organized sixty years ago, the 900 members of the Royal Naval Nursing Service have done their work well in Africa, India, China, and Egypt, on Malta and Gibraltar, at shore bases and on hospital ships. Their exploits add more luster to the record of nursing personnel throughout the ranks of the United Nations.

AUTHORIZE FILM FOR EMPLOYEE EDUCATION

Made possible through a gift of funds by the Becton-Dickinson Foundation, early production is scheduled on a motion picture to be devoted to the education of hospial employees in their aspects of the hospitals' relations with the public, according to the current issue of *Hospitals*, the journal of the American Hospital Association.

Acceptance of the grant was announced by the board of trustees of the association after its tender by Edward T. T. Williams, chairman of he executive committee of Becton, Dickinson & Co.

R. F. Cahalane is chairman of the association's council on public education, which will supervise production of the film.

WHY NOT MARRIED STUDENT NURSES?

Married student nurses? Well, why not?

These questions are asked—and answered—by Cecilia L. Schulz, R. N., prominent author in her profession, writing in the current issue of *Hospitals*, the journal of the American Hospital Association.

After reviewing some of the standard arguments against admiting married women for nurses' training, the author concludes that nursing may lose some of its best recruits by making the wedding ring a bar to student enrollment.

"Professional growth is not nourished by narrow prejudices or by antediluvian rulings," she writes. "The development of nursing into a full-grown profession depends in part on the adoption of modern policies concerning married student nurses. Problems do arise in connection with the married students—but none so complex that they cannot be ironed out."

Thousands of food parcels packed by volunteers are regularly shipped by the Ameriean Red Cross for distribution to American and United Nations prisoners of war and civilian internees in Europe. Similar shipments also go to the Far East. The Red Cross serves on every front. Maintenance of Red Cross services, however, depends upon the response to the 1944 Red Cross War Fund appeal. Let's give!

A soldier in the South Pacific received word of serious trouble at home. He went to the American Red Cross representative assigned to his unit. The latter, in cooperation with the man's home chapter, worked out a satisfactory solution of the family's difficulties. This is one of many Red Cross services to soldiers and sailors and their families, made possible by contributions to the Red Cross War Fund.

ORGANIZATION SECTION

THE UNITED PUBLIC HEALTH LEAGUE

In the January issue of Arizona Medicine, a report at length on the conference of some of the Western States held at Salt Lake on December 11, 1943, was published relative to setting up an Information Bureau at Washington, D. C. as a liaison medium for the profession of these states with Congress.

On January 29, 1944, a second conference was held at Salt Lake, the writer of this article again being in attendance. I will not go into details of this second session but will here give you a brief review of all actions to date relative to setting up a Bureau at Washington.

On December 11, 1943, the conference heard Mr. Ben Read, Executive Secretary of the Public Health League of California who had spent the month previous at Washington representing the California Medical Association in obtaining pertinent information as to the need for an Information Bureau at Washington.

It must be remembered at this point that the American Medical Association has stated that it may not operate such a Bureau or office as the AMA is a scientific organization, not a busi-

Statement of Principles

United Public Health League

Believing that the public health and welfare of the people of the United States demand that the medical profession promote a closer co-ordination between the profession and all branches of the federal government, and

Believing that federal legislators and officials are not being kept adequately informed of the problems inherent in the furnishing of adequate medical care and the maintenance of high professional standards, we, the founders of the United Public Health League do hereby adopt the following principles, which shall govern and guide the operation of the league.

1—The purposes and objects of the United Public Health League shall be those set forth in the Constitution and By-Laws of the League, namely, as follows:

- **(a) To educate the public to the proper evaluation of medicine, dentistry, nursing and the allied health sciences;**
- **(b) To make social, economic and other studies pertaining to the preservation of the public health and the care and treatment of the sick and injured;**
- **(c) To gain the enactment of Federal legislation effecting the greater usefulness of ethical medicine, dentistry, nursing and the allied health sciences;**
- **(d) To protect the public health, particularly by suggesting and supporting desirable forms of legislation and by opposing objectionable forms of medical, dental and public health legislation submitted to the Congress of the United States;**
- **(e) To protect the public against quackery and patented nostrums, fraudulent advertising and the medical practices of unqualified persons and groups;**
- **(f) To support those agencies having public health duties and functions in their efforts to reduce the prevalence of disease and disability and to promote the health of the people;**
- **(g) To protect qualified persons, institutions and agencies engaged in the care and treatment of the sick against unjust encroachment upon their functions and activities.**

2—It shall be the policy of the United Public Health League to cooperate with all allied ethical professional groups or other organizations which have mutual interests.

3—Recognizing the splendid achievements of the American Medical Association and its component societies in the fields of medical science, education, and research, it is specifically affirmed that it is not the purpose of the United Public Health League to enter into competition with any of these societies but only to supplement their present activities.

PETER BLONG, M. D. (California)
J. LA RUE ROBINSON, M. D. (Nevada)
F. B. JEPPESEN, M. D. (Idaho)
BRADFORD MURPHEY, M. D. (Colorado)
L. A. STEVENSON, M. D. (Utah)
JOHN S. BOUSLOG, M. D. (Colorado)
W. H. TIBBALS, Exec. Secy., (Utah)
G. P. LINGENFELTER (Colorado)
PARLEY NELSON, M. D. (Idaho)
J. D. HAMER, M. D. (Arizona)
A. H. SUTHERLAND, M. D. (Idaho)
D. H. MURRAY, M. D. (California)
JAMES P. KERBY, M. D. (Utah)

ness league. The same applies to the National Physicians Committee.

In view of all this, Mr. Reed reported at Salt Lake that members of Congress would welcome a medical information office at Washington. One Congressman, practically spoke for all, when he said in a written expression to Mr. Reed, "Finally, you asked my opinion regarding the advisability of having representatives from the American Medical Association here in Washington available for consultation. I think this would be an excellent idea, always provided that such a service did not degenerate simply into a lobby or a pressure organization; Congressmen become tired of both of the latter, I assure you! I assume, however, that there would be no danger of this materializing in view of the professional standards of medicine." The thought expressed in that communication is the guidance for the medical profession in their consideration for establishing a Bureau of Information at Washington.

At the second Salt Lake Conference, January 29, By-Laws for the proposed organization were adopted, several states having ratified the plan, with California appropriating $18,000 to set the Bureau into motion, and with the Public Health League of California loaning its executive secretary, Mr. Ben Read to inaugurate the work.

The name, United Public Health League was voted as the name for the organization and an office under that name may be opened in Washington on March 15 under the temporary management of Mr. Ben Read.

A statement of principles for the League was adopted which appears on these pages. To date the Council of the Arizona Medical Association has not voted its support of the League but will give it serious consideration at the time of the Annual Meeting when the House will be in session to take action on the matter.

There is no desire on the part of any of the states participating in this movement to cause any confusion with the activiies of the American Medical Association. Whatever ultimate plan is worked out by the various states—and other states than those of the western group are striving to support some acceptable bureau at Washington—must be one of complete harmony and altruistic service. There can not be several bureaus at Washington supported by several medical organizaions, there must be one supported by all.

It is certain that present relationships with Washington leave much to be desired with the medical profession receiving criticism as an organizaiton for not more fully meeting the need there for medical information.

The Western states, with Idaho, Colorado, Nevada and California voting the support of their respective organizaions, have a plan under way. It is hoped that this is properly timed and that good will come of it—good to the public as well as to the profession.

The Arizona Medical Association, through its Council and House, has a serious problem to consider with the inauguration of such a Bureau at Washington. Write in for any detailed information you may need in order to bring this matter before your local society for discussion here but the STATEMENT OF PRINCIPLES as found on these pages should serve as a sufficient guide for your local discussions, and for the purposes of your delegates.

NOTE: Since this report was written the Council on Medical Service and Public Relations of the American Medical Association have voted to set up a Bureau at Washington immediately. See the Journal of the American Medical Association for February 26, page 583 for this announcement. Stand by for report on final action of both the United Public Health League and the Council on Medical Service and Public Relations.

Signed,

Jesse D. Hamer, M. D. Chairman, Committee on Public Policy and Legislation.

MEETING OF THE COUNCIL

The Council of the Arizona State Medical Association at the call of the President met at Phoenix on February 6 to consider several items of business. Of the 14 members of the Council the following were present: Drs. O. E. Utzinger, E. Payne Palmer, Dan L. Mahoney, C. E. Yount, Geo. O. Bassett, Hal W. Rice, Chas P. Austin, F. W. Butler, D. F. Harbridge, John W. Pennington, J. D. Hamer, Frank J. Milloy. Drs. Florence B. Yount and Harold W. Kohl were not present.

The main item of business was a diseussion on the proposed western states league, known as the United Public Health League, which would comprise the western states medical associations for the purpose of seting up an information bureau at Washington. Two conferences on establishing sueh a league were held at Salt Lake City on December 11 and again on January 29. Dr. Jesse D. Hamer, chairman of the Committee on Public Policy and Legislation attended both conferences and the Council convened largely to hear Dr. Hamer's reports. A report from Dr. Hamer on the conference of December 11 was carried in the January issue of *Arizona Medicine* and his second report appears elsewhere in this number. The Council took no formal or definite action as to becoming a member of the League, but is awaiting certain legal information before recommending a plan of action to the House of Delegates for the April meeting.

At the request of the Committee on Public Health Education the Council voted funds for a series of radio programs on "What to do Before the Doctor Comes." The series is a set of transcriptions prepared by the American Medical Association for use in the various states and includes such topics as "Use and Misuse of Preseriptions," "Dangerous Drugs in the Home," "Immunization" and several other timely medicaly topics relating to children's ailments especially. The Committee will inform the membership as to date when the radio programs will open.

Funds were also voted to defray the expenses of the guest speakers for the Annual Meeting. As is known from previous annouueements, the scientific program for the Annual Meeting will be presented entirely by a group of instructors from the Medieal School of the University of Southern California. See other pages of this issue for details on this.

The Council also aceepted the reeommendation of the treasurer that $1,000 be invested in war bonds during the Fourth War Loan Drive.

The Council reiterated its previous stand that the Emergeney Maternal and Infant program, sponsored by the Government, be amended when next before the Congress and a direct allotment be made the soldier's wife for medical care for herself and new born infant. Our President attended a conferenee of the western states on this matter at San Franeisco in the fall and stressed that all states at that conference were unanimous in their desire for sueh an amendment. The set fee as now provided in the measure is not proving satisfaetory either to the patient or the physician.

The Council was complimentary in its comments on our new journal, Arizona Medieine, there being no further aetion necessary until the Annual Meeting at which time the By-laws are to be amended to make provisions for the Journal on a permanent basis.

Reports on Medical Defense were heard, no formal aetion being necessary.

No further meetings of the Conneil are anticipated until the Annual Meeting.

Frank J. Milloy, M. D.
Secretary

STATE HOSPITAL MEETING HELD

The Arizona Hospital Association held its annual meeting at Phoenix at the Adams Hotel on February 25 and 26, Dr. Chas W. Sechrist of Flagstaff presiding over the sessions as president of the organization.

A program of unusual interest was presented, papers being presented by Dr. Frank J. Walter, President of the American Hospital Association, Dr. E. Forrest Boyd of Los Angeles, Dr. Frank G. Gabriel of Albuquerque, Dr. E. Payne Palmer of Phoenix, Dr. B. Sedlaeek of the Navajo Indian Serviee, Mrs. Frieda Braun Erhardt of the Arizona State Board of Nurses, Mr. Dale Smith, Director of the Olive View Sanatorium, California, Dr. W. W. Watkins of Phoenix, Mrs. Peter C. Buffington of the Good Samaritan Hospital, Phoenix, and Mr. P. B. Lynch, Managing Editor of the Republie and Gazette, Phoenix. Invocation and Grace were offered by Father Emmett and Rollo C. LaPorte, both of Phoenix.

Governor Sidney P. Osborn addressed the dinner session on Friday evening, while Dr. Clarence G. Salsbury of Ganado and Mr. J. O. Sexson of Phoenix presided over round Table Luncheon discussions on Friday and Saturday.

Officers eleeted for the ensuing year were: President, Dr. Clarence G. Salsbury of the Sage

Memorial Hospital, Ganado; Vice-President, Sister Mary Eileen, Supt. St. Mary's Hospital, Tucson; Secretary-Treasurer, Dr. Chas W. Sechrist, Flagstaff; and Trustees, Charles S. Aston of the Tucson Medical Center and Mrs. Odessa Smith, Supt. of the Mohave General Hospital, Kingman.

Papers read before the meeting will be published in Arizona Medicine.

ARIZONA NURSES

The Arizona State Committee for Procurement and Assignment Service for nurses expects to complete the classification of ALL graduate nurses during the month of March.

Generally speaking all graduate nurses under fourty-five years of age, with no dependents under 14 years of age, will be declared available for military service, unless she is occupying an essential position and cannot be replaced or is physically disqualified.

Criteria have been set up by which the P. & A. Committee will judge the essentiality of a position.

This action has become necessary to fully meet the military needs and to maintain a balance between supply and distribution of skilled nursing service.

Thank you

Cecilia Gillespie,
State Chairman,
P. & A. Service for Nurses.

ST. JOSEPH'S BASE HOSPITAL UNIT

The following constitute the personnel of the Emergency Base Hospital Unit organized under the direction of the Office of Civilian Defense for Phoenix. St Joseph's Hospital was selected by O.C.D. and the members of the Unit were selected from the Staffs of both St. Joseph Hospital and the Good Samaritan Hospital.

All members have been granted Reserve Commissions in the U. S. Public Health Service.

TABLE OF ORGANIZATION FOR USPHS-OCD AFFILIATED UNITS
FRANK J. MILLOY, Director of Unit

Position in Unit		USPHS Title	Equivalent Army Rank
Chief of Medical Services	Frank J. Milloy	Senior Surgeon	Lieut. Col.
Asst. Chief of Medical Services	Robt. Flinn	Surgeon	Major
General Internists	J. D. Hamer H. J. McKeown	Passed Asst. Surgeon or Surgeon	Captain or Major
Chief of Surgical Services	E. P. Palmer, Sr.	Senior Surgeon	Lieut. Col.
Asst. Chief of Surgical Services	H. G. Williams	Surgeon	Major
General Surgeons	Mayo Robb V. Randolph	Surgeon	Major
General Surgeons	M. L. Day S. R. Caniglia	Passed Asst. Surgeon or Surgeon	Captain or Major
Orthopedic Surgeon	James Lytton-Smith	Surgeon	Major
Asst. Orthopedic Surgeon	D. T. Fournier	Passed Asst. Surgeon or Surgeon	Captain or Major
Dental Surgeon	Wm. A. Baker	Passed Asst. Surgeon or Surgeon	Captain or Major
Pathologist	M. Rosenthal	Passed Asst. Surgeon or Surgeon	Captain or Major
Radiologist	Maitland Dirks	Passed Asst. Surgeon or Surgeon	Captain or Major

REGULAR MEETING MARICOPA COUNTY MEDICAL SOCIETY

January 3, 1944

(Some remarks by Dr. H. L. Franklin, retiring President of The Maricopa County Medical Society.)

Before giving way to my successor, Dr. Pennington, I would like to comment on two events of the past year which seem to be worth a few words.

First: I would call your attention to the fact that the Blood Bank is now operating, which I am sure will be of very substantial benefit to the community. Inasmuch as it has been sponsored by this Society, members of whom serve as its Board of Directors, and Managers, we have a heavy responsibility in its well being. Because of the war the prevailing patriotic spirit helped considerably in its organization, though necessary equipment was, of course, difficult to obtain. When peace time again comes, and may we all hope and strive for it to come quickly, we will all have to give more thought to the Blood Bank, its method of operation and economy to keep it going as a sound public service. It will be much harder to keep it going after the aforesaid patriotic spirit subsides. I think we cannot give sufficient credit and thanks to the members of the Society who have had the responsibility in its organizaion. I sat in on some of their meetings and got some idea of the problems involved. Drs. Louis Baldwin, Howell Randolph, and Louis Jekel deserve special thanks for their time, thought, and great energy displayed in this undertaking. We also give thanks to many others who served on this committee in advisory capacities.

Second: The Society at the last meeting voted a special assessment of ten dollars each as a contribution to the National Physicians Committee to combat the Wagner-Murray bill now before Congress. The amount thus raised will be around thirteen or fourteen hundred dollars. I think when this money is finally collected and remitted, the Society should accompany it with some expresion of its feelings in the matter. As I understand it, this bill is like a great many other bills introduced in legislative assemblies. That is, it is a starting point toward something practicable and worth while. But amendments always have to be made before they finally become law. I do not think any of you doubt but that medical care for certain classes at public expense is going to be expanded after this war. It doesn't matter much whether our government is Democratic, New Deal, or Republican. The demand comes from definite economic forces and cannot be stopped by the opposition of the medical profession. We should go along and heartily approve of what we think is good, and, equally condemn what we think is bad. We probably should propose some sort of a medical care program for the low-income groups. The public has not and cannot be thoroughly convinced that we are wholly unselfish in fighting these measures, and if we fight these proposals in their entirety we will likely get something very distasteful, not only to ourselves, but to the public as well. A very good example of what I mean was in our handling of the Obstretic and Pediatric Program for dependents of those in the armed services last year. We refused, or failed to cooperate with the government people, whereupon they simply drew up a program to suit themselves and then told us to take it or leave it, and we were forced to take it.

In the beginning I anticipated some difficulty getting programs. I thought you would be too harrassed by other matters to bother with them. However, I was agreebly surprised at the wholehearted cooperation given by all in this matter, as well as by your attendance at the meetings. I think the programs for the past year will compare very favorably with those of any peace-time year.

Now, being President of this Society has caused me some extra work, but on the whole I have enjoyed it and I want to take this occasion to again thank you for thus honoring me.

The Scientific Meeting covering the subject of Poliomyelitis is presented elsewhere in this issue.

MARICOPA COUNTY MEDICAL SOCIETY

Blood Bank Headquarters, 710 E. Adams

Monday, February 7, 1944

SCIENTIFIC PROGRAM

1. The Need for Correlation Between the Doctor, the Hospital and the Blood Bank.
 Mrs. Louis B. Baldwin
2. Transfusion and Transfusion Reaction.
 Dr. Louis B. Baldwin

3. Procurement, Processing and Use of Plasma.
 Dr. Helen S. Gibbes
4. Types and Subtypes of Blood.
 Mr. Carl Baker

AMERICAN COLLEGE OF SURGEONS INITIATES 1943 ARIZONA

James H. Allen - - - - - - - - Prescott
Floyd B. Bralliar - - - - - - - Wickenburg
Zenas B. Noon - - - - - - - - - Nogales

YAVAPAI COUNTY MEDICAL SOCIETY

Herewith notes on Yavapai County Medical Society Meeting held at Whipple Hospital, February 17, 1944, at 7:30.

The Society members present were Drs. George O. Bassett, R. N. Looney, C. R. K. Swetnam, Florence B. Yount and C. E. Yount. Associate member Dr. Ernest C. Reed. From the Whipple Hospital staff,—Drs. Grover C. Daniels, Yoakley (Inspector from Washington, D. C.), Wilkiemeyer, W. J. Hornyak, C. B. Smithson, S. Weinstein, H. R. Braun, Altamere, Robbins and Kasper.

Dr. C. B. Smithson, Chief of the Surgical Service read a paper on "Obstructing Lesions of the Gastro-intestinal Tract." He presented case histories and X-rays, of cases from his service, illustrating lesions in the Oesophagus, Stomach, Deuodenum, Small intestines and Colon. The paper was well prepared, the cases well chosen and the "follow-up" on most of the cases made them particularly instructive.

Dr. Ernest C. Reed presented a paper on Cystic Disease of the lung—Synopsis herewith enclosed.

C. E. Yount, M. D.
Secretary

PIMA COUNTY MEDICAL SOCIETY
(Tucson)

Regular Meeting February 8

I. Symposium on Practical Pediatrics
 Dr. Vivian Tappan
 Discussed by Dr. Wm. H. Gault
 Dr. Virginia M. Cobb
 Dr. Elizabeth H. Laidlow

Staff Meetings

GOOD SAMARITAN HOSPITAL STAFF
(Phoenix)

OFFICERS

Dr. L. B. Baldwin, Chief of Staff
Dr. Wm. Woern, Vice-Chairman
Dr. B. P. Frissell, Secretary

COMMITTEE CHAIRMEN

Anesthesia, Robert H. Stevens
Pathology and Autopsy, Dr. Maurice Rosenthal
Pediatrics, Dr. E. H. Running
Medicine, Dr. J. D. Hamer
Records, Dr. Howell Randolph
Surgery, Dr. H. G. Williams
Orthopedics and Physiotherapy, Dr. James Lytton-Smith
Eye, Ear, Nose and Throat, Dr. Wm. Woern
Genito-Urinary, Dr. J. W. Pennington
Interne Training, Dr. Fred G. Holmes
Obstetrics and Gynecology, Dr. F. C. Jordan
X-ray, Dr. W. W. Watkins

ACTIVE STAFF MEMBERS

Louis B. Baldwin	R. E. L. Foster	J. W. Pennington
G. R. Barfoot	J. D. Hamer	Kenneth Peterson
L. D. Beck	Fred G. Holmes	E. E. Pohle
Paul Case	F. C. Jordan	Howell Randolph
Matthew Cohen	Louis Jekel	Victor Randolph
M. L. Day	James Lytton-Smith	E. H. Running
Robert L. Davis	M Matanovich	Paul Ryerson
Angus De Pinto	A. J. McIntyre	A. A. Shelley
J. E. Drane,	S. D. Little	Robert Stevens
George Enfield	L. C. McVay	W. W. Watkins
A. E. Cruthirds	H. J. McKeown	E. C. Wills
H. J. Felch	J. R. Moore	H. G. Williams
R. L. Flinn	J. M. Ovens	Wm. Woern
B. P. Frissel	E. Payne Palmer	
Wm. G. Furth	J. H. Patterson	

MEETING DECEMBER 20, 1943

I. Neurogenic Bladder
 Dr. J. W. Pennington
 Discussion: Dr. M. L. Day
II. Multiple Amebic Abscesses of Liver and Kidneys.
 Dr. R. S. Flinn

JANUARY 24, 1944

I. Carcinoma of Rectum and Colon
 Dr. H. G. Williams
II. Periarteritis Nodosum
 Dr. J. D. Hamer

ST. JOSEPH'S HOSPITAL STAFF
(Phoenix)

JANUARY 7, 1944

I. Congenital Absence of the Anus and the Lower Rectum with Successful Treatment of Same.
 Dr. Matthew Cohen
 Discussion by Dr. J. H. Patterson
II. Pre-operative Sulfaguanidine Therapy in Colon Surgery.
 Dr. Henry Williams

FEBRUARY 10, 1944

I. Perithyroiditis—A clinical Entity. Diagnosis and Medical Treatment.
 Dr. S. R. Caniglia
 Methods and Results of X-ray Treatment.
 Dr. M. S. Dirks
II. Report of a Case of Diabetes and Tuberculous Meningitis.
 Dr. Dudley Fournier.

Clinical Pathological Conferences

ST. JOSEPH'S STAFF
DECEMBER 13, 1943

DR. LESLIE KOBER:—The case is that of a white man, 65 years of age, who entered the hospital on October 28, complaining of nausea and epigastric distress; clay colored stools malaise, anorexis, jaundice and "a bad taste in the mouth."

The past history reveals that he has always worked hard and has been quite well except for deafness, following an unknown fever in childhood. Also remembers having attacks of what was called "bilious colic" during which he had upper epigastric cramps, nausea and vomiting lasting for a few days.

The present illness dates back to last March when he first became nauseated and had severe epigastric distress after working hard. He felt well otherwise until about two weeks ago when he began to notice acute and rather severe epigastric distress and nausea.

Has had a tendency to constipation but no other gastro-intestinal symptoms except for tenderness in the epigastric region. There has been no weight loss. Dyspnea has been present for several years and nausea and vomiting at times.

Examination shows: this man is deely jaundiced. The head and neck show nothing of importance. The lungs show fine rales—crackling in nature—at the end of deep inspiration over the right base posteriorly. The heart is within normal limits.

The abdomen is rounded, rigidity two plus but appears to be voluntary. Slight tenderness on deep pressure over the gall bladder region, where there is a small questionable palpable mass. The liver is enlarged—1 to 2 fingers' breadth below the costal arch—not appreciably tender.

On the day of entrance, X-ray examination of the gastro-intestinal tract was made.

The laboratory findings: urine, a trace of albumin; bile positive; a few casts. Blood count —94% hemoglobin, 4,400,000 R B C; 6,400 white cells 80% neutrophiles, 14% non-filament cells. Wassermann and Kahn, negative. On October 28, the van den Bergh was 7.5 mg. per 100 cc. of blood, and on Nov. 3, has reached 11.5 mg. The sputum showed pus but no B. Tb., or fungus. On the 31st X-ray examination of the chest was made.

DR. M. S. DIRKS: Roentgenological findings: Fluoroscopic examination of the esophagus, stomach and duodenum reveals a normal appearing esophageal outline. There is no delay or narrowing during descent of the barium. The gastric rugal pattern is smooth and pliable without demonstrable filling defect. The stomach is large and of the hypotonic type.

The duodenal bulb could be filled out completely, and although the patient has tenderness in the region of the bulb, no demonstrable defect in the bulb could be found. But, the second portion of the duodenum appears of normal caliber and variable contour.

A preliminary film was made before oral barium was given. It showed considerable gas within the colon; perhaps also in the lower ileum. There are no characteristic loops of dilated small bowel. It is noted that there is a shadow of increased density over the upper one-half of the right kidney. It is similar in outline to a gall bladder shadow, but not sufficiently characteristic to be definite. It is just as possible the shadow may be bowel.

Films of the stomach and small intestinal tract confirm fluoroscopic findings. Three of the small films show an abnormal appearance of the second portion of the duodenum. At 3 hours after barium, the stomach shows a trace of meal with remainder in lower small bowel.

Of interest, the patient has advanced hypertrophic changes in the spine and left hip joint.

CONCLUSIONS: Normal esophagus and stomach and duodenal cap. Narrowing, rigidity, and fixation of 2nd portion duodenum. Normal gastric motility and intestinal motility. No conclusive shadow of gall stones. Hypertrophic arthritis of spine and left hip.

He was referred to Dr. E. P. Palmer for surgery.

Progress: at first, his general condition improved but on Nov. 11, the incision opened and there was hemorrhage of bright red blood which saturated the dressings and bed. From this time on, there were recurring hemorrhages of varying intensity; Vitamines K and G were given. The stools remained clay colored. The patient became weaker, comatose and on Nov. 18,—21 days after admission, he expired.

Autopsy was done.

DR. TERESA MORAN: Summary of gross and microscopic findings from the autopsy records of the clinical conference case, December 12, 1943.

Gross Pathology

The stomach, liver, duodenum and pancreas were removed as a unit. The stomach was markedly dilated. Just proximal to the pyloric end of the stomach there was an opening leading into the gall bladder. The gall bladder wall was slightly thickened. The cystic duct was patent to the common duct. In the ampulla, here was a marked fibrosis with a small pin-head size opening. The pancreatic ducts also appeared fibrotic in this area.

Liver: The liver weighed 1600 grams. The surface was somewhat irregular, there being small nodules throughout. On section, the en-

tire liver substance was bile stained, the markings were markedly exaggerated. There was a definite increase in connective tissue throughout the liver. The extrahepatic biliary sytsem did not show any dilatation. The right and left hepatic ducts appeared normal.

Pancreas: There were marked adhesions around the pancreas. On section, the pancreas was almost completely replaced by degenerating tissue. In some areas, the pancreatic tissue occurred in small nodules which were fairly firm in consistency. The changes in the pancreas, extended throughout the head, body and tail.

Spleen: The spleen weighed 220 grams; the capsule was thickened; the trabeculae were prominent. The pulp was reddish brown in color and firm in consistency.

Microscopic

Liver: Sections of the liver showed a thickened capsule with subcapsular lymphocytic infiltration. There was a central necrosis in many areas, with complete degeneration of the liver cells and a deposit of pigment in the bile canaliculi. The lobules varied markedly in size. The peripheral portions of the lobules were partially replaced by an increase in connective tissue in which there were peripheral necrosis and a diffuse infiltration of connective tissue by lymphocytes and neutrophiles. The bile ducts showed an irregular contour with considerable branching and apparently an increase of ducts. In many of the ducts, there were neutrophiles while in others, there was a small amount of pigment. As a whole, the stasis of bile was in the bile canaliculi. There was considerable reduplication of the ducts.

Pancreas: Sections showed irregular areas of degeneraiton—in some zones there were complete liquefaction and necrosis. In other areas, there was a neutrophilic infiltration. The ducts showed no evidence of dilatation. The remaining glands were well formed and showed no unusual characteristics. The islet was fairly normal in appearance throughout all sections.

Spleen: Sections showed a thickening of the capsule and trabeculae. The pulp is fairly cellular with focal areas of hemorrhage throughout. The Malpighian bodies were relatively small but fairly well formed.

Anatomical Diagnosis

Biliary Cirrhosis of the liver with
(a) obstructive type of jaundice
(b) bile stasis

Pancreatitis with fatty necrosis.

GOOD SAMARITAN STAFF
DECEMBER 20, 1943

DR. ROBERT FLINN: The patient was a 63-year-old farmer. Upon admission to the hospital he stated that six weeks ago his illness began with pain and a sensation of fullness in his upper abdomen. He said that he was catheterized and told that he was passing a kidney stone. During the previous six weeks he had had chills and fever, and pain in the right upper quadrant, and on one occasion he had had retention of urine. He developed vague pains and aches throughout the body and a headache which lasted for about 4 weeks. He coughed and raised a thick, tenacious sputum.

Past History: He had had all the childhood diseases except mumps. He had had several attacks of influenza and had had lumbago for many years. 5 or 6 years ago he had erysipelas and 18 years ago he had malaria.

Family History: His father died at the age of 66 from tuberculosis. His mother died at the age of 72 with a chronic diarrhea. He had five brothers and sisters all of whom were dead, and the cause of death unknown. He thought one of them had died of diabetes.

Physical Findings: Physical examination upon admission revealed an acutely ill male complaining of epigastric pain. He was somewhat mentally confused. His mouth was foul, revealing pyorrhea with halitosis. Many of his teeth were missing, and a few carious teeth were present. His left pupil was smaller than the right, but both reacted to light and accommodation. His nose was clear, and his ears and eardrums were normal. Examination of his chest revealed nothing of clinical significance in the lungs. The heart was slightly rapid and the heart sounds were normal but distant. No murmurs or thrills were felt. The abdomen was soft and flabby throughout, but revealed a slight degree of tenderness on deep palpitation in the epigastrium. The liver and spleen were not palpable. At this time, no masses could be felt in the abdomen. The external genital organs were normal, and examination of the prostate revealed nothing of clinical significance.

Laboratory Data: Examination of the urine revealed specific gravity 1025; albumen, 2 plus; sugar 2 plus; an occasional white blood cell was found. The red cell count was 4,670,000; the white cell count was 29,750; hemoglobin was 97%. The blood chemistry revealed the following: Blood sugar 140 mgm; agglutination reactions for undulant fever were positive 1 to 160; agglutination for typhoid 1 to 320; Para A positive 1 to 120; Para B positive 1 to 320. Subsequent agglutination reactions done several days later for undulant fever were positive in 1 to 25 dilution with partial agglutination in 1 to 50 dilution. Widal reactions were positive for typhoid in 1 to 40 dilution, with partial agglutination in 1 to 80 dilution; positive with paratyphoid B in 1 to 20, with partial agglutination in 1 o 40 dilution. The stool examination was negative for ova, cysts and paracites, and the culture was negative for pathogenic organisms. Blood culture negative.

Progress: During his stay in the hospital,

the patient continued a progressive down-hill course, and was seen by numerous physicians. His temperature fluctuated between 98 and 103.8 during his entire stay. During the last few days his blood chemistry revealed an npn of 90 and a blood sugar of 174. His red blood count was down to 4,000,000; his white blood count rose to 47,200, and his hemoglobin was 75%. Several days before he expired the urine showed a 1 plus urobiligim and 4 plus urobilin. The patient continued to have chills and fever and abdominal pain. Terminally a mass could be palpated on the right side of the abdomen. The patient gradually became comatose, developed urinary retention, and expired in a comatose state.

In the general discussion after the presentation of this case this following conditions were discussed in the differential diagnosis.

1. Sepsis—Pyogenic infection.
2. Pyogenic abscess of liver.
3. Amebic abscess of liver.
4. Septicema.
5. Septic Cholangitis.
6. Round worms and flukes in liver.
7. Hydatid Cyst of liver.
8. Acute pancreatitis.
9. Diabetes.
10. Bacterial Endocarditis.
11. Malaria.

DR. M. ROSENTHAL: The following is the anatomical diagnosis:

"1. Abscess, multiple, of liver (amebiasis).
2. Amebic ulcerations of ileum.
3. Cysts of kidney, amebic.
4. Arteriosclerosis, local, of renal artery.
5. Thrombosis of portal vein.
6. Splenomegaly.
7. Amebic infection of tricuspid valves, questionable.
8. Enlargement of right heart due to hypertrophy and dilatation.
9. Thrombosis of mesenteric veins."

Histologic examinations of the liver, kidneys and ileum reveal the presence of amoebae.

ST. JOSEPH'S STAFF MEETING FEBRUARY 14, 1944

DR. DUDLEY FOURNIER: The case is that of a colored woman, 45 years of age, who entered the hospital January 13 in an unconscious condition. She had been in a deep stupor for three weeks. The family can give no information. The patient was told, 18 years before that she had diabetes but she has always refused to diet; eats pounds of sugar every week and has gained an enormous amount of weight.

Examination shows "air hunger" type of breathing; the skin is very dry; the urine is concentrated. There are moist rales and almost bronchial breathing in the base of each lung. The heart tones are forceful—no murmurs; the rhythm is regular: pulse rate 90, respirations 18 per minute; temperature 98.4°.

When aroused, the patient does not seem to have coordination in hands or legs and complains when the arms and legs are moved. On the day of admittance, a spinal tap was attempted but was unsuccessful. Patient has involuntary evacuation of the bladder and bowels.

Laboratory findings on day of admission: Urine, voided specimen, contains a heavy trace of albumin; the sugar reaction a brick red; no casts, no acetone or diacetic acid. The blood sugar tests were made and can be found on the sheet with the insulin record.

A week after admission, patient was responding to questions and was clear mentally. Continued in this improved condition for two days; then began to go into coma again rapidly. Blood sugar at this time was 214 mg.

Ten days after admission, the patient was in deep coma; not responding to 180-u of insulin entravenously. The urine output was very slow. The CO_2 combining power was normal—60%; the urine was negative for sugar.

Twelve days after admission, condition was practically unchanged.

On the 13th day, condition was unchanged; N P N was normal—36 Mg.

X-Ray of skull for condition of the sella was unsatisfactory due to the condition of the patient but showed an indistinct posterior wall of the sella pressure or other type of destruction.

The temperature varied from 98.4 on admission to 99 on the 4th day and from 98 to 102 on the 6th and then varied from 102 to 98.8 rising the day before death to 103.4.

The pulse also varied from 90 on admission, increasing to 120 staying between 120-130 on the seventh day, than dropped to 100 for a few hours then increased to 130 and rose to 145 the day before death. Respirations were also varied in rate, changing with the pulse from 14 on admission to 45 when the pulse rate reached 125, and climbed to 55 just before death.

On the 15th day after admission, the patient died and an autopsy was performed.

DR. ROBERT H. STEVENS: In the case under discussion tonight it would seem that the main problem is to determine whether the hyperglycemia and glycosuria are manifestations of a true diabetes mellitus or symptoms of a lesion elsewhere. As Dr. Flinn has already suggested the lack of acetone bodies in the urine in a case of evident long-standing glycosuria is reason to believe that this is not a true pancreatic diabetes. Also, the downward progress of the patient under attempted diabetic management is additional reason to consider the lesion as other than pancreatic.

If we may, for purposes of discussion, rule out diabetes mellitus, what other diseases might produce the glycosuria.

For the sake of completeness we must consider alimentary and renal glycosuria. The lack

of excessive carbohydrate intake, at least in the Hospital excludes the former. The continued hyperglycemia rules out a low renal threshold as the sole cause of her difficulty.

Next, we know that certain lesions of the hypothalamus may produce both hyperglycemia, glycosuria and periods of stupor. Tumor of the adrenal gland may produce a similar picture. A thyrotoxicosis could conceivably cause the hyperglycemia. The absence of continued tachycardia, loss in weight or enlargement of the thyroid could pretty well exclude the latter from consideration.

Since an adrenal tumor would produce much he same changes as the so-called basophilic adenoma of the anterior pituitary, this will be considered with the latter.

Then lesions of the hypothalamus which includes the basal nuclei, tuber cinereum, infundibulum and hypophysis, remain as possibilities. Questionable change in the sella turcica is further evidence pointing to this area as the probable origin of her disease.

Disease in this area producing the changes recorded would need be tumorous in nature. The tumor could be neoplastic, infectious or traumatic. Lack of history of recent trauma practically excludes the latter. Of the neoplastic group they could originate from the pituitary gland, nervous and connective tissue or osseous system. The most probable tumor producing all the changes present in the case tonight would be a basophilic adenoma of the anterior pituitary,—the so-called Cushing's syndrome. Periods of prolonged stupor are common. But in addition, with this lesion, there is usually found hypertension, hirsutism, sexual dystrophy, osteoporosis, Buffalo type of face and neck obesity, etc. If any of these findings were present except the obesity, they were not recorded. We are not even given the blood pressure reading. In the absence of a majority of the above findings, of course, we cannot reasonably assume that the pituitary-adrenal syndrome was present, but certainly it seems the most likely. Other neoplastic changes in the region could be the answer.

Of the infectious group we might have a gumma, tuberculoma, or parasitic cyst. The failure to mention serology in the summary would seem to mean that this was negative, but in any colored person in this age group, it is a potent possibility. A tuberculoma could produce the change and a tuberculous meningitis would account for the stupor, coma and downhill course, as has been suggested by Dr. C. N. Ploussard. A spinal tap would have been helpful. Lastly a parasitic cyst such as that from echinococcus disease would merit consideraion.

General Discussion

The concensus of opinion of the discussants was that while the patient had a hyperglycemia, she was not a true case of diabetes mellitus and did not die from this disease.

DR. TERESA MORAN: Summary of essential findings at post mortem examination:

Liver: weighed 1600 grams; studded with small yellowish zones, closely packed, approximately the size of a pin head.

Pancreas: Normal in size, shape and position. Multiple sections throughout the entire pancreas showed no abnormalities.

Spleen: weighed 250 grams; increase in fibrous tissue.

Kidneys: right, weighed 160 grams; the left, 140 grams. Capsule strips with difficulty leaving a grandular surface. Cortex 4-6 mm. in thickness; well defined from the pyramids which are normal.

Pituitary: appears smaller than normal and the sella is deepened somewhat.

Brain: Meninges were hyperemic; so were the velles of the cortex considerable edema was present but there was no evidence of tumor, hemorrhage or softening.

Microscopic

Liver: showed the cells of the central portion of the lobules were vacuolated. Increase in fibrous tissue at the periphery and throughout the liver there are numerous areas of fibrosis arranged in tubercle formation with giant cell formation.

Pancreas: The glandular tissue is normal in appearance. The lobules are compact, the glands are well formed. The islands of Langerhans are numerous and appear to be well formed, composed however, of a uniform type of cell,—small with compact hyperchromatic nuclei and a small amount of eosinophilic cytoplasm.

Kidneys: There are triangular zones of fibrosis in which there is almost complete destruction of the normal architecture of the kidneys. The glomeruli are partially to completely fibrosed. In some areas there is hyalinization of the afferent arterioles with thickening of the capsule.

Pituitary: The sections show an outer layer composed of neutrophilies with numerous plasma cells., lymphocytes and the vessels are hyperemic. The anterior lobe is infiltrated with lymphocytes. In most areas, there is an increase in basophilic cells with a few chromophobe cells being present. The posterior lobe is not unusual in appearance.

Brain: The meninges are composed almost wholly of lymphocytes and plasma cells with an occasional giant cell being present.

Anatomical Diagnosis

1. Tuberculous meningitis;
2. Pulmonary tuberculosis;
3. Tb of the liver and spleen;
4. Nephrosclerosis with generalized arteriosclerosis;
5. Obesity;
6. Basophilic hyperplasia of the pituitary;
7. Terminal myocardial failure.

Woman's Auxiliary

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Bulletin: Mrs. Dan L. Mahoney, 1916 East 4th St., Tucson
Hygeia: Mrs. John L. Donahue, 2416 East Speedway, Tucson.
Historian: Mrs. Geo. B. Irvine, 1100 Mill Road, Tempe.
War Service: Mrs. J. D. Hamer, 1819 N. 11th Ave., Phoenix.

PIMA AUXILIARY

The Pima Auxiliary has met as scheduled at the Red Cross work rooms carrying out their usual work.

The annual election of officers will be held in March. Activities in full will be reported after the business meeting.

The Auxiliary was pleased to have an address at its last regular meeting on the Wagner Bill, Dr. C. A. Thomas, member of the Arizona Medical Association Committee on Public Policy and Legislation, presenting a complete picture of the socialized aspects of his proposed legislation. The members of the Auxiliary will be better prepared to discuss this measure with their friends after hearing this enlighting address.

MARICOPA AUXILIARY

The Maricopa Auxiliary has taken on several new projects this season. The Auxiliary is co-sponsoring with the YWCA a course in sex education directed by Dr. Phyllis Schaefer. A second project is participating in the activities of the Soldiers' Center by serving as hostesses on Wednesdays from 1 until 4. The sandwiches served are supplied by the Auxiliary. A $100 war bond was purchased during the 4th War Loan Drive.

Recently launched is a drive for discarded woolen materials to be used for packs by the hospitals for the Kenny treatment for poliomyelitis. A large committee has been appointed to contact the churches, and various business and civic organizations to serve as depositories for the discarded materials and to aid in publicity. Other counties will be asked to assist in his work, and the plan will be fully explained at the time of the Annual Meeting.

The Auxiliary wishes to take this opportunity to invite the wife of every member of the state association to attend the Annual Meeting at Phoenix at Hotel Westward Ho on April 14 and 15. Plans for the meeting are well under way under the direction of Mrs. Louis G. Jekel, general chairman. Committees serving for the purposes of the Annual meeting appear in the program section of this issue of the Journal. Do attend as our welcome guests whether there is an Auxiliary in your county or not.

News Letters

The following is the Maricopa County Society's Regular News Letter:

(Letter from Maj. Geo. Truman to members of the Society. Dated December 10, 1943.)

Somewhere in Italy.

"I received the Society News Letter today and was glad to hear about all of the fellows. Have not had a chance to see Charlie Borah, although I understand he is over here somewhere. We are quite comfortable in our tent; we have a stove and radio, both going full blast. Across from me sits Courter, also writing, who interned at St. Joseph's '38 and '39. Every once in a while the music is accentuated by the distant explosion of the big guns; but all in all it is quiet here. About the only thing we don't like about it is THE MUD, of which, there is PLENTY. Who said 'SUNNY' Italy? Well, best wishes for a Merry Christmas and a Happy New Year to you all."

"Brink" Brinkerhoff has returned from seven months on Guadalcanal. He has had a one month leave and has now returned to San Diego. He looks about the same old 'beanpole' that he always did. While here he gave us an evening filled with thrilling experiences, most



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of which you will have to wait 'till you see him to hear. "Brink" has seen some real fireworks —several burning bombers in the air at one time. He admits that he can do without more of the same but calls it a great experience.

"Joe" Bank visited Phoenix on the 17th. He says he's enjoying his work and that he is working harder than ever now, as there are only three medical officers to handle 400 bed patients in his outfit. Many of his cases are more or less chronic type, such as arthritis, nerve circulatory neurasthenia. But many of them are difficult diagnostic problems, gastro-intestinal and liver diseases. He is finding it necessary to use the gastroscope and bronchoscope a great deal.

Phoenix has a big score board erected on the corner of Adams and Central and daily programs are being staged to stimulate War Bond sales. Army bands, singing and speeches.

John Ricker has been given an appointment as Lieutenant in the Army. He leaves soon.

Several new names have been added to the membership roster of the Society recently: Drs. T. N. Rafferty, Paul McCracken, Layton A. Love, Helen S. Gibbes, Bert L. Snyder, R. W. Rosenquist, Donald G. Carlson, Wesley Forster, John L. Hagan.

(The following is from a letter received by Mrs. Palmer Dysart from Capt. Palmer Dysart: "Discussion on Atabrine.")

"In anticipation of stopping my quinine on January 2nd, which marks six months of it, I am saturating my system with four atabrine tablets daily, for it takes some time to build up a sufficient blood level, unlike quinine, for the level must be up when the quinine is stopped for its concentration in the system drops very rapidly upon cessation of it, and I don't want an intreval to occur in which I am without protection agains an attack of malaria, for I, undoubtedly, have some sporozoits in my system just waiting to change into healthy trophozoits and start gobbling up my precious erythrocytes. When I stop the quinine, I expect to have assumed the proper tint of a jaundiced yellow-green, and will then drop to one tablet daily,

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Chas P. Austin, M. D. (1945) — Morenci
Southern District (Cochise, Greenlee, Graham Pima, Santa Cruz)
E. Payne Palmer, M. D. — Phoenix
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*Hal W. Rice, M. D. (1945) — Bisbee
D. F. Harbridge, M. D. (1944) — Phoenix
*Serving unexpired term of W. Paul Holbrook in Service.

COMMITTEES

Scientific

Scientific Assembly — Dan L. Mahoney, President-Elect, Chairman, Tucson; T. C. Harper (1944), Globe; F. J. Milloy, (1945), Phoenix; D. W. Kittredge, Jr., Flagstaff, (1946); H. L. Franklin, (1944), Phoenix.

Scientific Education and Post Graduate Activities—A. H. Dysterheft, (1946), McNary; H. J. McKeown, (1944), Phoenix; Florence B. Yount, (1945), Prescott; Chas. S. Kibler, (1945, Tucson.

Industrial Health—C. B. Huestis, (1946), Hayden; C. P. Austin, (1944), Morenci; E. M. Hayden, (1945), Tucson.

Syphilis and Social Diseases—L. G. Jekel, (1946), Phoenix; O. B. Moon, (1944), Bisbee; Geo. O. Bassett, (1945), Prescott.

Maternal and Child Health—Hiward C. James, (1945), Tucson; Fred C. Jordan, (1944), Phoenix; W. P. Sherrill, (1946), Phoenix.

Orthopedics—E. W. Adamson, (1946), Douglas; Royal W. Rudolph, (1944), Tucson; Jas. Lytton-Smith, (1945), Phoenix.

Tuberculosis Control—Sam H. Watson, (1946), Tucson; Jas. H. Allen, (1944), Prescott; E. W. Phillips, (1945), Phoenix.

Cancer Control—E. Payne Palmer, Phoenix; M. G. Wright, Winslow; Geo. O. Hartman, Tucson; J. N. Stratton, Safford.

History and Obituaries—Historian, Hal W. Rice, Bisbee; J. D. Hamer, Phoenix; Frank J. Milloy, Phoenix.

Non-Scientific

Public Policy and Legislation—C. A. Thomas, (1944), Tucson; J. D. Hamer, (1945), Phoenix; Walter Brazie, (1946), Kingman.

Medical Defense—J. D. Hamer, Phoenix, Chairman; D. F. Harbridge, Phoenix; A. C. Carlson, Jerome.

State Health Relations—A. K. Duncan, (1944), Douglas; Donald F. Hill, (1945), Tucson; E. Henry Running, (1946), Phoenix.

Medical Economics—Meade Clyne, Tucson; Melvin L. Kent, Mesa; A. P. Kimball, (1946), Yuma.

Industrial Relations — C. E. Yount, Prescott, Chairman; Meade Clyne, Tucson; John W. Pennington, Phoenix; A. C. Carlson, Jerome; Jas. Lytton-Smith, Phoenix; Frank J. Milloy, Sec'y to Committee.

Public Health Education—H. L. McMartin, (1944), Phoenix; J. S. Gonzalez, (1946), Nogales; Paul H. Case, (1945), Phoenix; Geo. O. Bassett, Prescott.

Editing and Publishing—J. D. Hamer, (1944), Phoenix; D. F. Harbridge, (1945), Phoenix; Frank J. Milloy, (1946).

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A preparation of natural estrogens, Amniotin is also available. It is obtained from urine of pregnant mares—is a highly concentrated, non-crystalline preparation of estrone together with small varying amounts of other estrogenic ketones. It is supplied in corn oil solution for intramuscular use and in capsules for oral administration. Also in pessaries.

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and continue it for months after I leave the malarious area.

"We cannot discuss the results of Atabrine therapy. I do know that it is relatively non-toxic, and causes no symptoms except in very exceptional cases, in which it causes nausea, evidently due to some gastro-intestinal irritation, rather than a systemic effect. I am no longer as cautious with it, for it has been found that eight or more tablets a day can be tolerated for indefinite periods—and we used to worry about giving a course of fifteen tablets in a five day period. Four tablets a day don't bother me even though I take two at a time on an empty stomach."

* * *

The following is from another letter from another letter from Capt. Dysart, which Mrs. Dysart thought you would like to read:

"One of the officers who is going out at the head of another outfit told me that he had formally requested my transfer to his new outfit, but his request was refused as he was told that they had other plans for me. That is the fourth time that some outfit has applied to have me transferred to them. It makes me feel a bit awed and humble, but it is nice to be appreciated, and such things brighten our life under these conditions."

The Blood Bank is acting as host to the Society for the regular monthly meeting next week. We will, no doubt, have a great deal to report in the way of "Blood Bank News" in our next "News Letter."

Since the men in service are the ones most affected by the citizenship clause in the Constitution and By-Laws, the proposed change in that clause was voted down at the last meeting. There are still 18 States in the United States, which do not require citizenship for licensure. Over half the doctors examined and requesting licensure in the State of New York are granted licenses.

(Letter from Maj. P. T. Brown to Dr. Howell Randolph.)

Somewhere in New Guinea
Nov. 19, 1944

Dear Howell:

I have a new address now, but I think not very near Palmer Dysart, if he is where I be-

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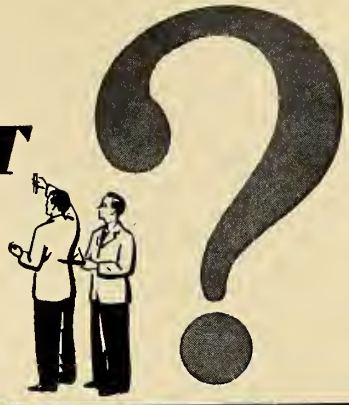
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lieve he is. In spite of its gruesome name, this land is rapidly improving and we are located in a nice area—a coconut grove, and I have seen only one mosquito since I have been here. When all set up, our hospital is going to be very fine—equipment equal to that at home.

Altho the humidity is high, the heat is not bad, yet, in fact, I sleep under a blanket every night. Our greatest hardships are being unable to spend money and having to do our laundry by hand. As it's unusually muddy and the soil is black as tar so there is lots of it. We have had fireworks on a———— (There was not room for the rest of this sentence on the bottom of his V-Mail letter.)

Yours, P. T.

(Letter from Maj. H. D. Ketcherside to Dr. Howell Randolph.)

Dec. 5, 1943

Dear Howell:

I have enjoyed your monthly letters and I intended to write my appreciation long ago, but was a little embarrassed that I was still on this side of the pond, after trying very hard to get across.

Our unit has been on the desert ten months and they surely will not keep us here much longer.

I never see any of the Phoenix doctors but I have seen a number of other Phoenix people. Doctor Carson's death was quite a shock to me, I did not learn of it until I received your letter yesterday.

The field rations seem to be agreeing with me. I have gained twenty pounds.

Give my regards to all the gang!

Sincerely yours, Hilary

Our new librarian, Miss Lorraine Kelly, most humbly begs your indulgence for all the mistakes in this, her first "News Letter" and promises to do better on the next one! (We hope!)

(Letter from Lt. Comdr. Daniel J. Condon to Dr. Paul Case.)

Portland, Oregon
Dec. 16, 1943

Dear Paul:

I have just received your, more than welcome, News Letter, of November 24, and would



When the flame flickers

IT LIES within your power to steady the flickering fires of woman's middle life . . . to check their erratic flaring . . . to help them glow more steadily . . .

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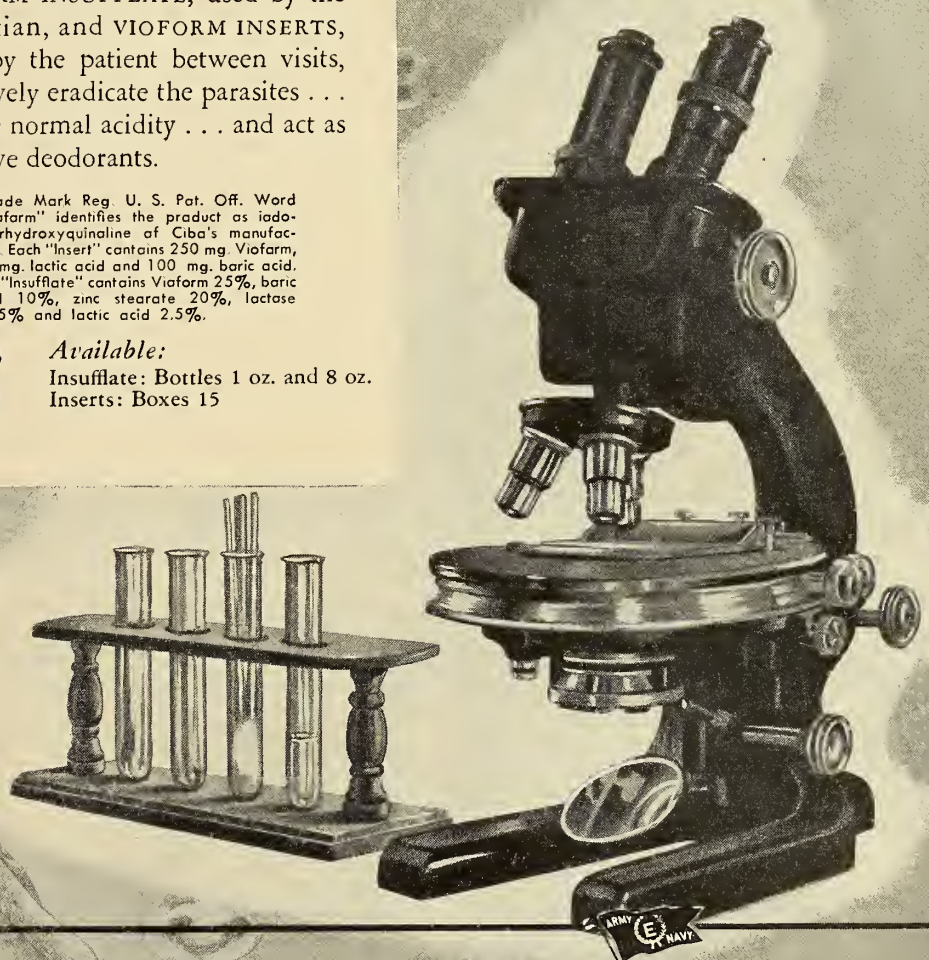
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Sincerely,
Daniel J. Condon

Capt. Zenda Hurianek reports that she is enjoying her work very much; but that she, of course, misses her friends and associates. She is to be at Macon General Hospital for thirty days, for 196 hours of instruction and is to then report to Atlanta for further orders.

Book Reviews

NASCENT ENDOCRINE THERAPY by John Franklin Ritter, M. D. P.P. 317. The Caxton Printers, Ltd., Caldwell, Idaho.

The reviewer of this volume considers the treatise to be of questionable value even though dedicated "to the ten million sufferers from hypertension, hypotension, and peptic ulcer who could be restored to health or greatly relieved—by using nascent endocrine therapy." The term "nascent" implies the use of active fresh material direct from healthy animal donors to the patient rather than the use of material devitalized by preservatives. Of the many animals experimented upon, the goat was selected as the most suitable for many reasons given by the author. The following paragraph quoted from the text would seem to condense the main concept in the author's mind.

"Briefly, nascent, endocrine therapy is the use of various glandular or organic secretions, or the actual secretory tissues in their natural or nascent state, taken from the animal donor and transferred with the least possible manipulation to the recipient. Either the normal secretion may be squeezed out of the tissues by simple compression, or the glandular secreting tissue may be wholly transferred to the patient in the form of a transplant."

The author offers no apology for empiricism but after eighteen years of therapeutic work and treating five thousand human cases by endocrine therapy, he presents this treatise in the hope of aiding in the control of some forms of disease that have resisted our scientific efforts.

H. P. Mills, M. D.

Many books have been written concerning the problems of educating mentally and physically handicapped children. Some have touch-



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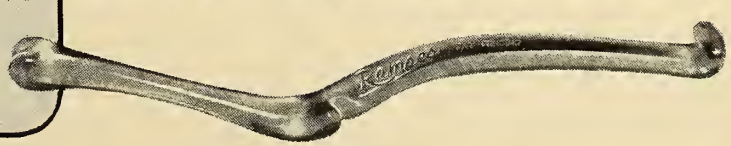
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DIAPHRAGM INTRODUCER



ed upon questions related to the partially seeing child, but the need for specific information concerning not only the problems, but ways of solving them, has long been felt. *Education and Health of the Partially Seeing Child*, published by Columbia University Press, was prepared by Winifred Hathaway, Associate Director, National Society for the Prevention of Blindness, Inc., to meet this need.

Mrs. Hathaway writes from a quarter of a century of experience as a leader in the campaign for better understanding of, and greater opportunities for, those youngsters who because of seriously defective vision are unable to make use of ordinary school equipment, yet have too much sight to be educated as blind children. This very practical and readable book is intended to serve teachers preparing to undertake this work, those already in service, superintendents of schools, supervisors, physicians, nurses· social workers, parents—all who are concerned with the welfare of children with defective vision.

The author presents material gathered from many sources. This includes a brief history of the growing realization of the need for special educational procedures, the establishment of schools and classes in Great Britain and on the Continent to meet this need, and the establishment of the first class in America in 1913 in the city of Boston, Massachusetts; the book traces the movement up to the present time when here are 630 classes established in 222 cities and towns in 31 states, the District of Colombia, and Hawaii, having a total enrollment of approximately 9,000 girls and boys.

The author states, however, that these classes serve but a small proportion of the estimated number of 60,000 partially seeing children in the United States, and her book offers solutions that even a teacher of a one-room rural school will find practical in caring for a partially sighted child in her group.

Certain chapters of the books are devoted to educational media designed for the use of such children—books in large type, maps and pictures with definite onlines and few details, special paper, chalk, pencils, typewriters with large type and, where possible· mechanical devices such a radio. Talking Book, Dictaphone.

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* *Laryngoscope, Feb. 1935, Vol XLV, No. 2, 149-154*

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The author, however, makes suggestions for substitutions where such material is not available.

Mrs. Hathaway stresses the importance of teachers well prepared for this work through means of special courses following fundamental educational training and experiences, and equally well-prepared supervisors, not only those of special education, but elementary and high school supervisors—state, city and county—who should be able to give assistance to teachers in both urban and rural communities. Other chapters deal with the physical and mental health of partially seeing children and the effect of deviations from the normal on educational processes and procedures.

The application of modern educational methods of non-segregation is brought out, correcting the idea that the establishment of special classes for such children means cutting them off from contact with their companions.

The chapters on financing the education of these children will be of special interest to superintendents and business managers of educational systems. Colleges for the preparation of teachers will find the book invaluable for hteir student bodies.

COLOR FILMS

The motion picture in color, "Continuous Caudal Analgesia in Obstetrics," which was made available by Eli Lilly and Company, Indianapolis, for showing before medical societies and hospital staffs, has been in continuous demand since release several months ago. It was made at the U. S. Marine Hospital, Staten Island, by authorization of the Surgeon General, U. S. Public Health Service, and the demonstrations were carried out by Drs. Hingson and Edwards, originators of the technic.

The three films that were made at the Nutrition Clinic of the University of Cincinnati in the Hillman Hospital, Birmingham, Alabama, under the joint auspices of the Department of Internal Medicine at the University of Cincinnati and the University Hospitals of Cleveland have likewise been in constant circulation. One of these deals with thiamin chloride deficiency, one with nicotinic acid deficiency, and the third with ariboflavinosis.

None of the films contain advertising. They are available to physicians for showing before medical societies and hospital staffs.

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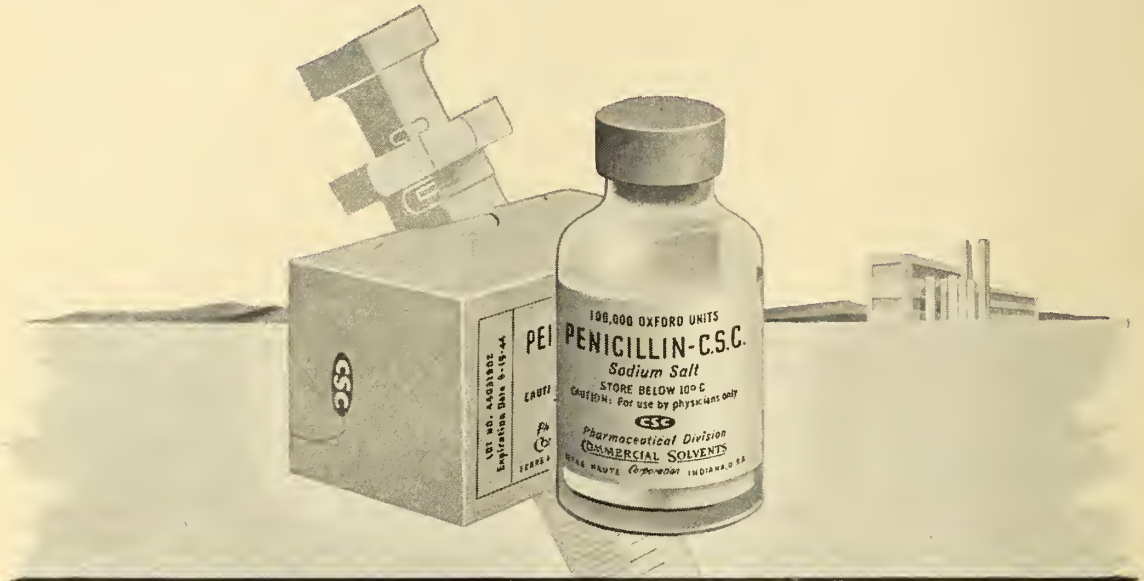
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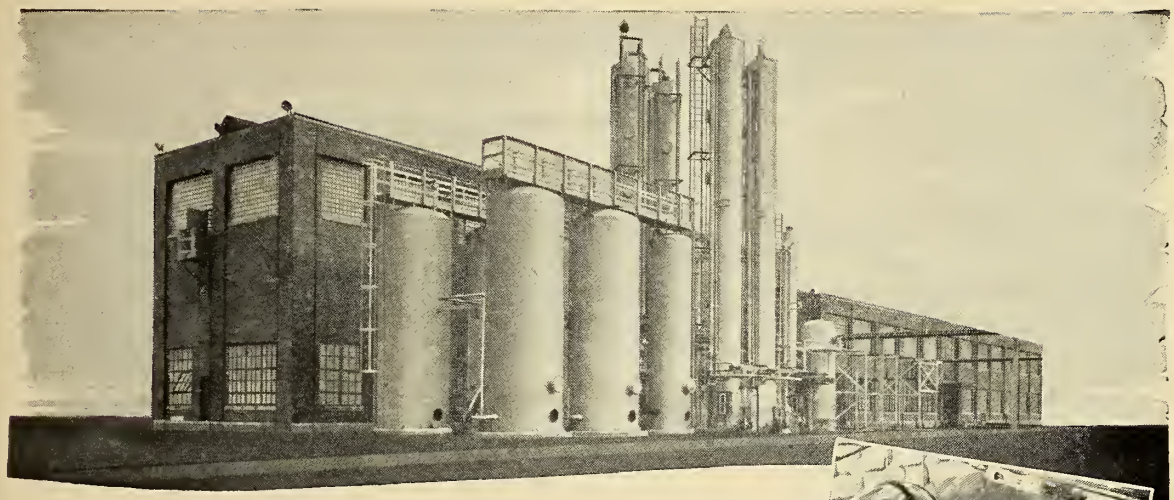
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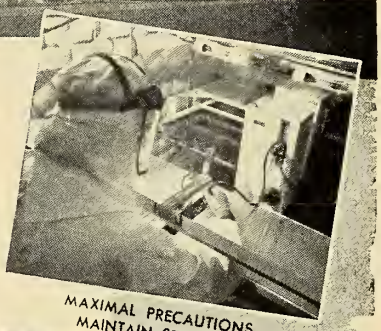
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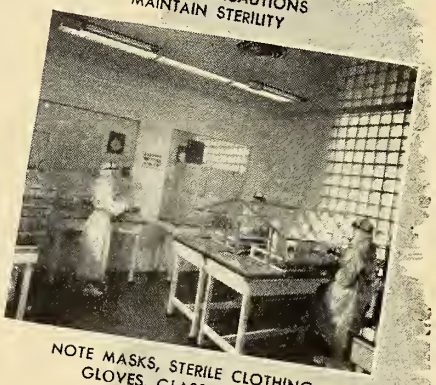
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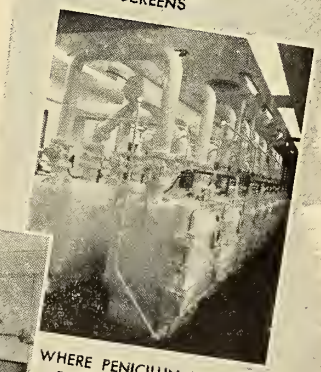
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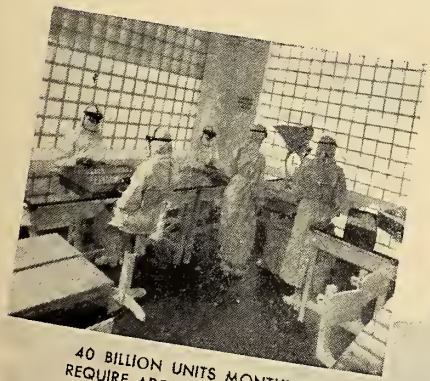
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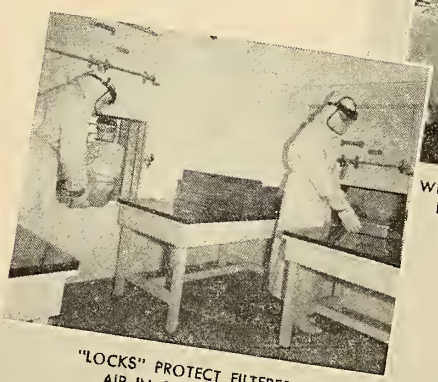
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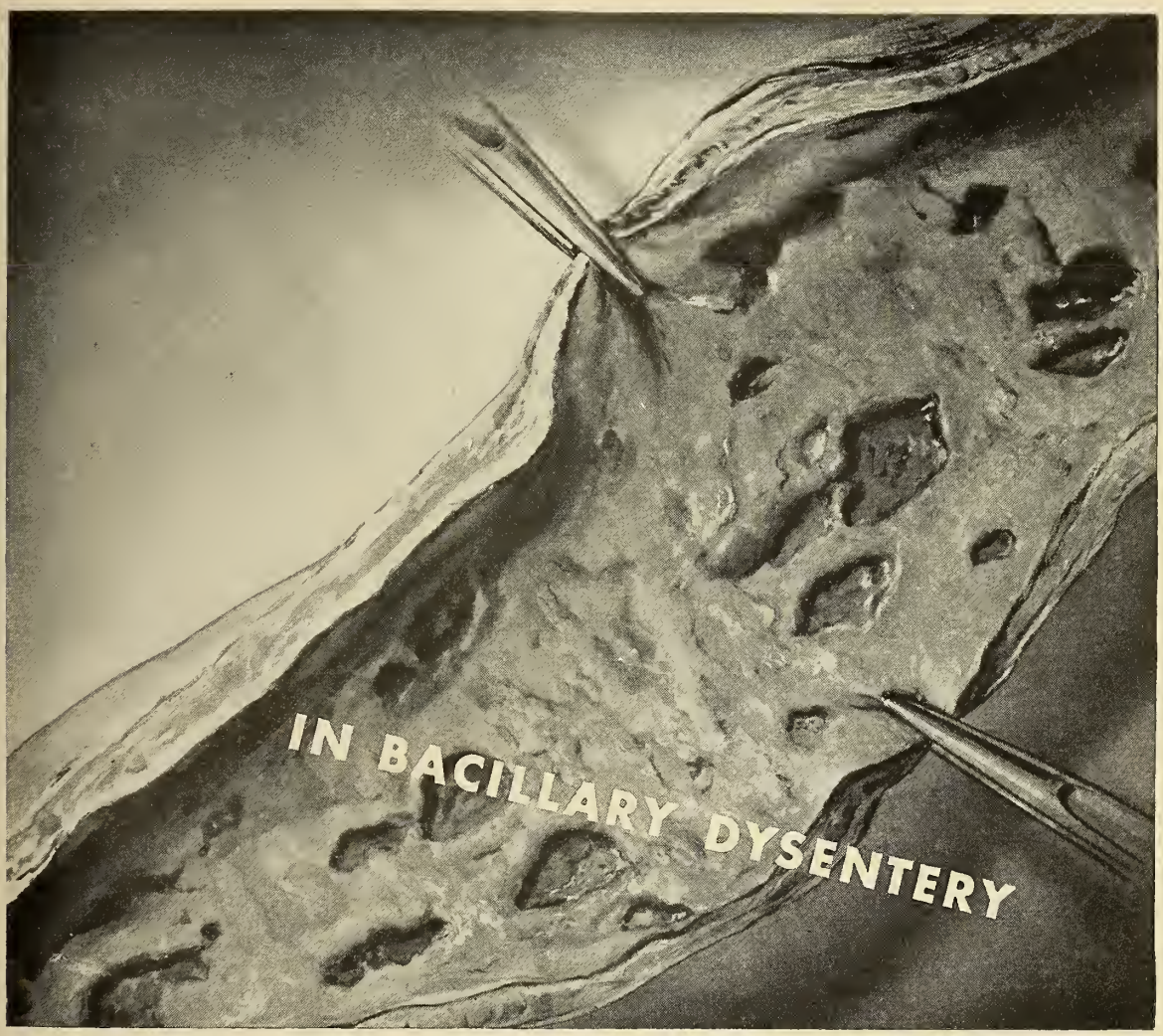
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1 J. Lab. & Clin. Med., 28:162, 1942. 2. J. A. M. A., 119:615, 1942.

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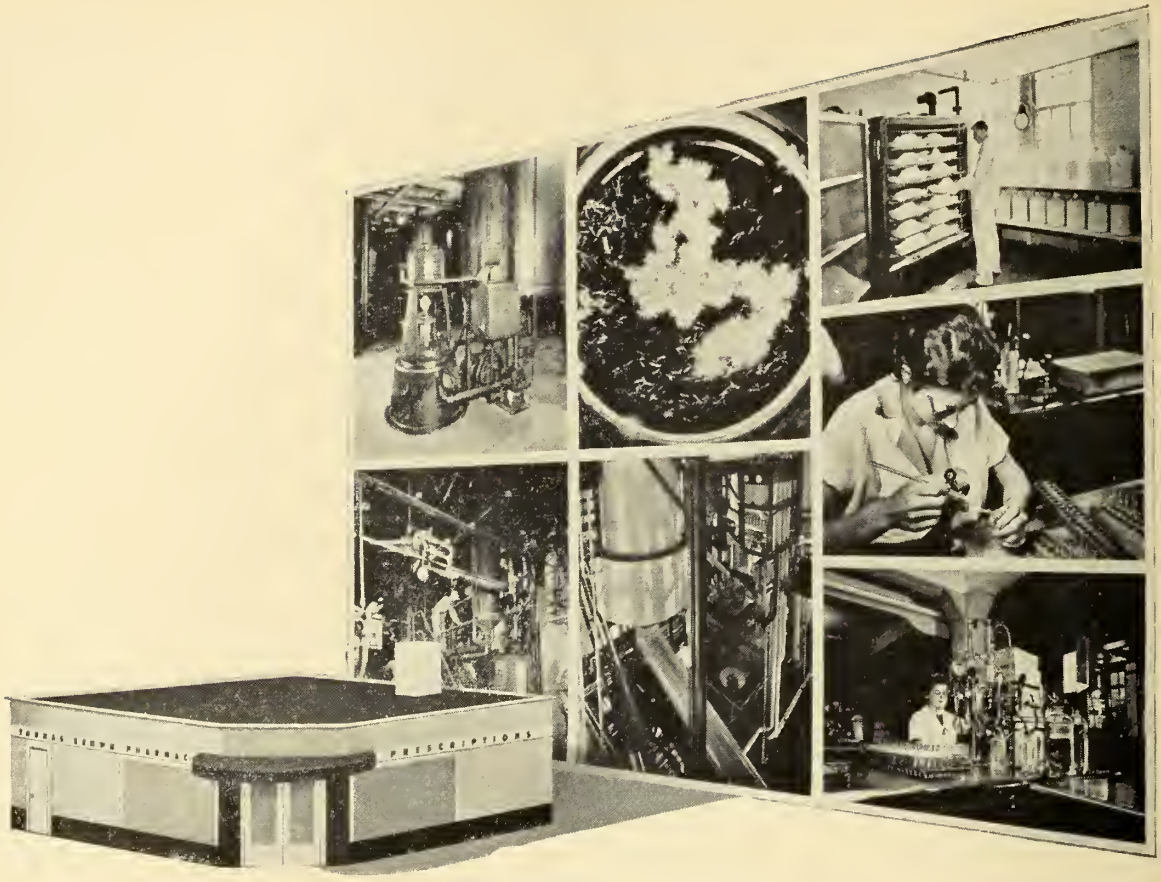
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Lilly BUY WAR BONDS FOR VICTORY

"MEDICINE ON THE MARCH"

DAN L. MAHONEY, M. D.
Tucson, Arizona

I appreciate the honor of being selected to head such an important organization as the Arizona State Medical Association.

However, I am only a cog in the wheel, since our Society divides the responsibility among the various officers and committees.

When I say "important" in speaking of our Association, I realize that there is no organization today that may better aid in forming plans for the war and post-war welfare of our people than the profession and organization of medicine.

Medicine is on the march in the first problem to confront it during this war era—that of supplying a complete medical personnel for our armed forces, and supplying a medical care for our servicemen second to none in the history of the world. The problem of supplying a personnel for the armed forces came to us prior to Pearl Harbor when physicians, holding reserve commissions, answered the call, left their practices and served the defense forces as medical officers. After Pearl Harbor came the speedy call for volunteers over and above those holding reserve commissions. Thousands of physicians immediately volunteered their services for wherever needed. Arizona physicians answered by meeting her quota by far more than 100% and are now in service on home and foreign bases. Physicians will continue to volunteer until the Peace, and for as long thereafter as necessary.

Our profession has welcomed this opportunity to serve our country—first in World War I, and now in World War II—and to share in the inconveniences as well as the patriotisms of war. There are inconveniences, for, with so many of the profession in service, those remaining in civilian practice have assumed a case load of patients equal at times, in the life of each of us, to the exhaustion of a major engagement on the battlefront. Both at home and abroad physicians are laying down their lives in the war effort.

The scientific achievements of medicine in all lines of service are being extolled by the general press. Never before has scientific medicine and surgery done so much on the very field of action as today. These successes are too well known both to the public and to the profession to need discussion here. We shall only emphasize that medicine *is* on the march in war.

The second problem confronting the medical profession is that of civilian care, and we say with justifiable pride—criticisms of the political economist to the contrary—that here again we find medicine moving ahead. While the number of physicians in civilian practice has been greatly reduced, never before have civilians thronged to the physician's office as they do today. This is due, in part, to the fact that the civilian has a tremendous war-time job to do and must keep physically fit if he is to do the work required of him and her. People in all walks of life are more health conscious, and more are doing something about it, than ever before in our memory. Medicine at at home is keeping full step with its achievements in war, both as to type of treatment and number of patients treated.

I pause here to pay tribute to the patient in war and at home. The serviceman is gritting his teeth and bearing his pain with characteristic grit and courage. His first thought is for his "Buddy"—care for him first. The patient at home is equally considerate—he calls his physician as little as possible at night; he lightens the load all he can in the light of comfort and safety. This may well be called heroism.

In connection with civilian medical service there is a major problem that has claimed the study of the medical profession for years, and that is the question of health and hospital insurance under some workable, voluntary plan. Our own Association, as our President recently pointed out, gave the problem serious study just prior to the war, hoping to set up some plan in this state. It was found not only inadvisable but impossible to launch a workable, non-profit, voluntary plan. Scattered population and lack of industry was the difficulty. With the present industrial up-trend our study

President's Address, Annual Meeting Arizona Medical Association, April 15, 1944.

will be resumed to determine whether now may be the time.

In such a study, it must be realized by all concerned that a complex social, political and economic problem is wrapped up in any plan of health insurance. The greatest single need in the problem, at the moment, is for sound information. The ramifications of the problem are so complex, and the effects so far in the future that specific information at this time is difficult.

There is not the great need for health insurance that those in high political places would have us believe, for the people themselves have shown the usual American initiative and thrift by doing something about such insurance in their own way. My authority for the figures I am about to quote, and for the statements I am about to make, is Mr. Harold R. Gordon, Executive Secretary of the Health and Accident Underwriters.

According to Mr. Gordon, in 1934 the Health and Accident Underwriters report there were 8,000,000 people in the United States insured under some form of sound accident and health insurance. At the end of 1942 this number had increased—nearly fourfold—to 30,000,000. The end of 1944 will show a proportionate increase. About one-fourth of our states, through their medical organizations have workable non-profit health insurance plans in effect—in those states of centralized, industrial populations especially.

"There is little room for any contention that such insurance does not reach into the vitals of the nation, from low paid working classes to highly paid executives. Considered with the enormous amounts of life insurance and savings accounts, it would seem that the people themselves are working upward toward a voluntary type of 'cradle to the grave' security, and if allowed to do so, may, within a few years, attain even more astounding results." This is sound thinking based on sound fact, emanating, as it does, from insurance authorities of the nation.

Adding an unrest and uncertainty to the health insurance problem is the attempt of those in political power to foist on the public a compulsory, socialistic, medical service proposed in the well-known Wagner-Murray Bill, or Senate Bill N. 1161. The political proponents of this legislation did not consult with those in the field of medicine. On the contrary, they ignored the man of medicine and went to the out-and-out socialist for advice and direction, unless they drew it up alone.

This is the type of socialism which would destroy the very Democracy for which we are fighting!

On this point I would like to quote a recent editorial from a Duluth (Minn.) Daily paper. It says, "The Wagner-Murray Bill, now before Congress, violates too many rights of the people and their self-government. A special committee of the American Bar Association has made a strongly disapproving report and offers a critical analysis in which people who have given the matter study will heartily join.

'Socialized medicine' has an alluring sound, but an examination of what is proposed under this guise is far from alluring. Generally stated, the object of the bill appears to be something that the nation has been looking for; but on probing its provisions it will be found that it is taking away not only rights, but privileges and making guinea pigs of people.

Under the bill's provisions, the committee's report notes, the whole medical profession would be under the supervision of the surgeon general of the United States, and no matter how splendid a man he might be—with political changes an added risk—this profession on which the nation bases its trust for health and healing, would be subject to the prejudices and ambitions of one man, with no appeal provided.

One important omission in the bill is uncovered by the committee, namely, 'the indigent, who are most in need of medical care, would not be covered by this measure.' Why, then, socialized medicine at all? The classes that are not included in the indigent levels are amply able to pay for their own medical care. The indigent, which included the lower bracket earners and those who are dependent on public bounty and are excluded from this bill, need just such a measure if anybody does. Without including them, the bill is an empty gesture, a hollow measure, and a very dangerous one." Unquote.

The political exponents of such socialistic medical care know full well that the medical

profession, and medical organizations, are not only willing, but anxious to solve the problem of providing better facilities for medical care at lower costs. Yet when the medical organizations establish such successful health insurance plans as are now in operation in the more populous states, and when the medical organizations point to these successful operations as steps in the right direction toward solving this health problem, their efforts are ignored and given the political "brush-off".

An editorial in a mid-westetrn paper summed the situation up in a fair way recently when it stated: "Proponents of socialized medicine can not expect the same doctors who now vehemently protest the destruction of their freedom, to don the shackles of legislation such as the Wagner-Murray Bill and continue to serve with unimpaired efficiency. The doctors have a tradition of freedom behind them, just as have the rest of us. They are used to living in, and being a part of, a society of free men. In proposing to set them apart from this society, we have confronted them with an appalling prospect. Is it any wonder they rebel? Who wouldn't."

There is our problem in a nut-shell. And I say, medicine is on the march in this problem as it has been in all others. The objective can not be reached today or tomorrrow, but when it is gained by a slow, steady growth—and not by some socialistic cabal—the man of medicine will be right up there at the top with those who have worked out a plan that fits in with the real American way of life.

Now we advance to the post-war with its present maze of plans for post-war living. Medicine is going to have problems to solve—some new ones—and medicine will continue to make spectacular gains. We men of medicine feel, however, that the main problem in the post-war era will be the one I have already discussed—*better facilities for medical care at lower costs.*

For what I would say on the social and economic aspects of post-war medicine, I can do no better than to quote from an address on "Social Security in the Post-War" as given by Mr. Eric A. Johnston, President of the Chamber of Commerce of the United States, when he opened the conference on Social Security held in Washington on January 10 and 11 last. Said Mr. Johnston: "Just as I believe in business insurance, so I believe that social insurance has a place in a dynamic, changeful system. Social insurance can never assure complete protection—the risks are too diverse, and it is not the function of the state to become the guardian of its adult citizens. Rather, the purpose of social security is to provide protection for minimum standards. . . . Our system of social insurance should be so designed and, if you will, so propagandized that it will encourage individual thrift, and so that it will promote voluntary group action, such as the magnificent performances of the voluntary group hospitalization plans which already provide hospital insurance for 15 million people." Unquote.

Medicine is not asleep—it is not even napping—on this problem of extension of medical care. It is on the march, and will march on to as certain victory as our nation, in this terrible and unjust war, if all will but continue their faith in the medical profession, and not be led astray by the words of communistic theorists.

As medicine has given the world penicillin, with its great scientific promise, and the sulfa drugs, with their miraculous healing powers, so will medicine find a sound solution for better facilities for medical care at lower costs. There must be no lock-step; no shackles.

I thank you.

AIR EVACUATION

COLONEL PAUL HOLBROOK, M. C.
Washington, D. C.

TODAY the Eighth Air Force dropped 2,000 tons of bombs on the industrial target in Germany. It may have been yesterday, or the day before, or last week, but it is going on daily. It is the medical story of the delivery of these bombs that I would like to tell you. Of course, I shall ask for a little imagination, and I believe that you will agree that it is the stuff that dreams are made of.

Delivered before Arizona State Medical Association, Phoenix, April 15, 1944.

From the earliest days man has longed for and dreamed of flying. I believe you all remember the story of Icerus who fashioned himself a pair of wings, and tried to fly. Also the story of Pegasus. These show how little men knew of our atmospheric conditions. There was also Leonardo da Vinci, artist, engineer, painter, and history's No. 1 aviation enthusiast. During the course of the invention of many flying gadgets he crippled many of his servants, and on his death bed he is quoted as saying: "Men shall fly."

Man has been grounded for centuries. He has been limited to 15 or 20 miles an hour by horseback, and also limited to two dimensions. In our generation came the streamlined train and automobile. These could travel 100 miles an hour. Almost over night came unheard of speed, 400 miles, 500 miles, and now in dives, almost 800 miles. Remember the arguments as to whether man could sustain a speed of 100 miles an hour. Since the development of the airplane there has been a constant contest between man and the machine. Today the machine can out-perform man.

The function of medical aviation concerns the selection, adaptation and maintenance of man in this new element, with these terrific speeds and many changes from his long history of having been grounded. It is the part of medicine to adapt and maintain the man that made it possible to deliver those 2,000 tons of bombs on Germany.

Consider a few of the problems confronting the bomber flying at a certain height and dropping bombs. At 30,000 feet the crew would remain alive only a few seconds if it were not for Oxygen, oxygen masks, electrically insulated flying suits, instruments that will not freeze, and many other so-called miracles accomplished by the Air Force. At this above mentioned height, the barometric pressure drops to 280 mms. The volume of gas in your bowels or blood is multiplied by three. The air is 50 or 60 degrees below zero. The speed is terrific. To all this is added the cumbersomness of the electrically heated suits, oxygen masks, etc. Man is transformed into a new environment. These matters are called to your attention because they mean the difference between man surviving and conquering the air and his failure. The questions of changes of pace, the number of blackouts, the terrific stresses and strains in rapid changes of posture, all bring thousands of problems which he does not have to face on the ground. Fear is a very important factor. We can fortify his air with oxygen, we can insulate his body with an electrically heated suit, but there is no simple formula for reinforcing his nervous system. The air force faces a definite problem.

From the day a boy starts training, there are accidents, crashes. Joe doesn't come back. A few days later the bunk next to Joe's is empty. Casualties occur. There is constant fear of flying, no matter how adventurous one may live or wish to live. Mose of the branches of the Army and Navy make preparation for battle. Their training is long and arduous. They do not expect to get hurt until they finally enter into actual battle. However, the Air Force is different. There is a psychological problem confronting the flyer. This is where the Flight Surgeon comes in. He must be able to handle their fears and worries, and help them overcome them.

Another of the striking developments has been Air Evacuation. In the beginning of this war we were faced with the problem of not having airplanes enough. The Air Force wanted airplane ambulances. People said it could not be done. When the roads were clogged with the necessity of moving supplies, they were thereby blocked for the evacuation of the sick and injured. The air was the only open road. It was therefore decided that ordinary cargo planes that carried supplies would be designed so that in 8 minutes after unloading supplies, it could be transformed into an ambulance airplane.

Already air evacuation has passed the 200,000 mark for transporting sick and injured in this war. I believe that air evacuation should be listed with blood plasma and the sulfa drugs in saving of lives. Air evacuation would see seriously wounded patients in a base hospital in a few hours which otherwise might take days and weeks of travel.

I wish to leave this thought with you that the medical problems in connection with the dropping of the 2,000 tons of bombs you read about, mean a tremendous amount of research, plain care, much thought and real originality of the air force medical set-up. The change that has occurred in our own lives shows that what man dreams of he can accomplish.

MODERN ATTITUDES IN HEMOLYTIC ANEMIA

GURTH CARPENTER
Assistant Professor of Medicine, U. S. C. Medical School
Los Angeles, Calif.

INTRODUCTION

IT is characteristic of all human achievement that it progresses in wavelike expansions of understanding. It is singularly characteristic of medical understanding that a significant contribution falls on stony ground, and does not lead to the development which it deserves until some rediscoverer sails anew the ocean blue. Thus, it took Herrick to rediscover for the profession at large the already adequately described syndrome of coronary occlusion. And Moss, and again Jansky, must rediscover the blood groups before the significance of Landsteiner's work came to light. In the 1920's we acquired new insight into the Iron Deficiency Anemias. In the 1930's the Boston School greatly widened our understanding of the Deficiency Anemias of the Pernicous Anemia type. In the 1940's we are discovering a new understanding of the Hemolytic Anemias. At this point we must pay tribute to the keen clinical observations of the great school of physicians in Paris preceding the last World War. A great deal of the phenomena which occupy papers today are redescriptions of observations made by such men as Widal, Hayem, Minkowski, and Troisier, which English speaking medicine, preoccupied with the eminence of the German school of morphological pathology, largely chose to overlook. As ever, this has led to anomalies of medical nomenclature, and we find general acceptance of the name Lederer's anemia for an acute hemolytic syndrome described with greater accuracy and detail at least fifteen years previously by Chauffard and Vincent.

Hemolytic anemia, or hemolytic icterus, or acholuric jaundice, are essentially terms that are interchangeable in their significance. The syndrome has never been rare. The increasing complexity of our chemical existence in civil, industrial and therapeutic life is indubitably increasing its frequency. Extending experience with sulphonamides and other drugs is teaching us that it is not the minimum lethal dose with which we are contending, but unpredictable idiosyncrasies to very small doses.

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DIAGNOSIS OF HEMOLYTIC ANEMIA

The first problem is the recognition of hemolysis. This may be very easy when acute anemia is accompanied by an icterus which bears all evidences of being of the pre-hepatic, or hemolytic variety. But, on the one hand, mild hemolysis can be compensated for by increased production, and this state of affairs may last a lifetime in mild cases of congenital familial hemolytic anemia. And on the other hand, considerable hemolysis can be compensated for by an increased output of bilirubin by a competent liver, and it is not always that severe icterus will accompany excessive hemolysis. The situation is further complicated by the fact that many agents or diseases causing hemolysis are either competent to damage the bone marrow, and thus interfere with regeneration, or to damage the liver, and thus interfere with regeneration, or to damage the liver, and thus interfere with normal pigmentary functions. Thus the situation may be confused, and the recognition of a hemolytic syndrome may not be easy.

The acceptance of an anemia as hemolytic usually depends on the evaluation of two clinical phases, namely, the hematologic reactions and the pigmentary reactions.

HEMATOLOGIC REACTIONS

It has been conclusively demonstrated by Dameshek and his co-workers that cells damaged by hemolytic agents of various kinds in vivo become microspheres. This is a simple expression of damage to the expanding elasticity of the external membrane of the erythrocyte, which maintains normally the maximal area enclosing a given volume, namely, the area covering a biconcave disc. Each red cell still contains the normal complement of hemoglobin, so that the color index, mean corpuscular hemoglobin, and cell volume of microspheres are normal. However, their diameter measured on the Price Jones curve, and their thickness calculated from v.Boros' chart show them to be small in diameter and thick in cross section. The experienced eye can easily recognize these cells in an ordinary dry smear or in wet preparations. In very

acute hemolytic processes a high proportion of the cells are microspheres, and in congenital hemolytic anemia all the cells are small and thick, even after apparent cure with splenectomy.

Hemolysis is a very strong stimulus to delivery from the bone marrow of young red cells. The young cells so delivered are reticulocytes, and in hemolytic processes may amount to over ninety per cent of the total red cell population. These cells are apt to be larger than the normal cell population, and if they dominate the picture, the blood picture will be hyperchromic and macrocytic. It is to be expected that small spheroidal cells are more than normally fragile to hypotonic salines, for two possible reasons. First, their membranes may be damaged, and therefore less ready to stand osmotic stress, and secondly, their spheroidal form allows the imbibition of less fluid before they attain their maximum volume without stretching of the membrane. Thus, blood pictures dominated by microspherocytes are apt to show increased fragility in hypotonic saline, and these dominated by macrocytes, which are large and flat, are apt to show more than usual resistance. However, these relationships do not always maintain, and therefore abnormal fragility is no measure of the fact of increased hemolysis in vivo, nor normal fragility of its absence.

PIGMENTARY FUNCTIONS

If blood destruction is sufficiently rapid, hemoglobin will leak into the urine, and may be recognized by the color of the urine and by the positive benzidine reaction with absence of intact red cells. Hemoglobin must then be present in the blood plasma, and may be recognized therein with the spectroscope. The increased bilirubin content dependent on hemoglobin breakdown leads to clinical jaundice which is less than the icterus index would indicate, because the pigment is adherent to the albumen molecule and does not readily diffuse from the circulation. Such bilirubin gives the direct, delayed van den Bergh reaction unless there is associated hepatic damage, which is frequent, when the reaction is biphasic.

The increased output of bilirubin leads to increased content of urobilinogen in the stools. Normally, this is less than 200 mgms. daily, frequently less than 100. In hemolytic anemias this figure may rise to over 3000 mgms. in the day. This is the only real approximation to the degree of hemolysis in any given case, but unfortunately the chemistry, while quite simple, is tedious, and therefore not in general clinical usage. If the stool urobilinogen content is high, the resorption into the blood is high. Normally, the resorbed urobilinogen does not appear in any quantity in the urine, but if it is present in great excess, or if there is hepatic cellular damage, it is freely present, and may be recognized as giving a rose color with Ehrlich's paradimethylaminobenzaldehyd reagent in dilutions of fresh urine of over 1-20.

Thus, in summary, the recognition of hemolysis depends on (1) examination of the blood smears for microspherocytosis or reactive macrocytosis, and for reticulocytosis, (2) the search for hemoglobinuria or hemoglobinemia, (3) for increased icterus index, (4) for delayed direct van den bergh, (5) for excessive quantities of urobilinogen in urine, and (6) if feasible, a quantitative measure of the stool urobilinogen.

HEMOLYTIC MECHANISMS

Hemolytic anemia may be produced in a number of different ways. Some understanding of the different mechanisms is necessary to the diagnostician who would adopt a rational approach to the therapy of an individual case.

1. THE CONGENITAL, FAMILIAL HEMOLYTIC DISEASE. *(Congenital acholuric jaundice of Minkowski and Chauffard.)* The essential feature of the disease is the constant microspherocytosis. Even the reticulocytes are microspheres. Whether they are so by action of an agent extrinsic to them, or by defective manufacture in the bone marrow, has not been settled. The fragility is usually though not constantly increased. The severity of the disease seems to depend on the vigor of the splenic response to these deformed cells. Except in neo-natal cases and cases first seen in acute hemolytic crisis the diagnosis based on the familial history, the characteristic appearance of the pallid underdeveloped individual, and the outstanding microspherocytosis is usually not difficult.

2. ACQUIRED HEMOLYTIC SYNDROMES These are usually marked by a blood picture dominant in the regenerative phase, and consequent hyperchromic macrocytosis. Fragility

is usually, though not constantly, normal. These syndromes may eventuate by a number of mechanisms.

a. PARASITISM OF THE RED CELLS. *Malaria* in man, and *Texas Fever in cattle*, (caused by the Piroplasm, Babesia bigeminis) both give rise to hemolytic anemia. Piroplasmosis has been described as infecting practically all domesticated and laboratory animals with the exception of man, which seems unreasonable. Among the micro-organisms, the Bartonella group are essentially parasitic in red cells. In man, acquired hemolytic anemia in *Oroya Fever* is caused by Bartonella hominis, transmitted by the bite of a certain type of Sand Fly limited to altitudes of beween 3,000 and 8,000 feet in the Oroya valley above Lima, in Peru. The skin manifestations of the disease are known as *Verruga Peruviana*, or Peruvian warts. In animal experiment, Bartonella Muris and Bartonella Canis have been the source of much confusion. Any ordinary laboratory rat from which the spleen has been removed, or which is exposed to low oxygen pressures, develops anemia based on loss of control of his symbiosis with rat bartonella. Similarly, dogs with Eck's fistulae develop bartonellosis and anemia not primarily dependent on interference with liver function.

b. SIMPLE CHEMICAL HEMOLYSIS. Certain chemicals which are hemolytic in vitro may gain access to circulation and cause acquired hemolytic anemic syndromes. Some are simple solvents of lipoids, e. g. *hydroxylamine, benzol, or dioxane;* others are strong inhibitors of surface tension and belong to the general class of detergents, e. g. *soaps, saponins, or the byophil-byophobe antiseptics* like Zephiran. Others are non-specific oxidising agents, e. g. chlorates (tooth paste and gargles). *Benzol, and phenyl-hydrazine* have been used, the latter extensively, for their ability to cause hemolysis, in polycythemia.

c. COMPLEX CHEMICAL HEMOLYSIS. Certain chemicals will only cause hemolysis in the presence of serum complement, i. e. they will not hemolyse cells suspended in plasma that has been heated to 56. In other words, they work just like the hemolysin in a hemolytic system, and sensitise the red cells to the hemolytic power of complement. Examples of such chemicals are silicic acid (which does not enter clinical medicine) or *crotalin,* the active hemolytic agent from cobra venom.

It is not yet exactly known how such chemicals as *sulphonamides, arsphenamine, lead, gold, acetanilid, phenothiazone,* etc. produce the hemolytic anemia which occasionally follows their use. They are not simple hemolytic agents, nor are they hemolytic agents in the sense described immediately above. Very recently, in the serum from these cases, it is being shown that both auto-hemolysins and, or, auto-hemagglutinins may be present. One is then led to wonder if the active drug, say, sulfanilamid, may not so condition the red cell surface that it becomes antigenic in the circulation, and the hemolysin be elaborated on that basis. This brings us to the next group, namely, the spontaneous hemolytic anemias in which

d. AUTO-HEMOLYSINS ARE PRESENT. These may be present in both the *acute febrile acquired hemolytic anemia* (so-called *Lederer type,)* or in the *types of chronic acquired hemolytic anemia (acquired hemolytic anemia of Hayem and Widal).* The presence of such hemolysins was first demonstrated by Chauffard and Vincent, and subsequently attention has been refocused on them by Dameshek. Certain auto-hemolysins are specific in their development and modus operandi. Thus in tertiary syphilis a "hemolysin" may develop which sensitises red cells in the cold (4°C) so that when warmed (37°C) in the presence of complement, vigorous hemolysis occurs. Exposure to cold thus produces *Paroxysmal Hemoglobinuria* The phenomenon was demonstrated to be reproducible in vitro by Donath and Landsteiner, and by Eason independently, and is usually known on the Donath-Landsteiner effect. In the *Marcia-Fava Syndrome,* which is often familial, the hemolysis occurs during sleep, producing matutinal hemoglobinuria, which is thought to be due to an abnormal sensitivity of red cells to an acid medium. Suspension of a sufferer's red cells in a weak acid serum (so-called Ham test) may cause their hypernomal lysis.

e. AUTO-AGGLUTININS MAY BE PRESENT, and if they are present in high titer, they may overshadow the presence of associated hemolysins. The nature of these acute febrile hemolytic anemias is at present not established. They are commoner in the young, and some-

times occur simultaneously in two or three members of a family or school, which has strongly suggested their infectious nature. Recent demonstration of the high titer of cold fixed pan-agglutinins which regularly accompany virus pneumonia further strengthens this possibility. Generally, the acute cases show a considerable tendency to spontaneous recovery if they are supported by blood transfusions.

f. FAVISM IS A FORM OF HYPERERGIC hemolysis due to idiosyncrasy to the proteins of *Vicia Fava*, the Jack Bean. Sensitive individuals are mostly of Sardinian or Corsican extraction. In such persons the pollen from a bean field, or to eat the young bean, will precipitate an acute hemolytic anemia, sometimes with hemoglobinuria. The phenomenon has not been explained by in vitro experiment with cells and sera from affected persons. Luisada maintains that other vegetable proteins may cause similar reactions, but there is little evidence bearing on this possibility.

g. SYMPTOMATIC ACQUIRED HEMOLYTIC ANEMIA may accompany a number of diseases. Those most frequently associated are *cirrhosis of the liver*, *necrotic tumor* tissue in any zone, *tumors of the splenic pulp*, and the *myelophthisic processes*, especially those due to Hodgkin's disease of the bone marrow, to carcinomatosis of the bone marrow, and to leukemia. Auto-agglutination has been described with some such cases, but the pathological mechanism is not understood.

h. IN ELDERLY PERSONS, CHRONIC ACQUIRED HEMOLYTIC ANEMIA may be associated with no demonstrable cause of hemolysis either during life or at autopsy. The failure to demonstrate hemolysins does not mean that these are not present in tissues. Moreover, titers of hemolysin produced by creating an immune serum in animals which may cause little hemolysis in the test tube, may produce vigorous hemolysis in vivo. This "causeless" chronic hemolytic anemia is particularly seen in the elderly.

i. POST-TRANSFUSION ISO-IMMUNIZATION AND MATERNAL ISO-IMMUNIZATION. In 1941 Landsteiner and Wiener described a hitherto undescribed blood grouping, namely, the different responses given by humans cells to anti-rhesus cell sera. 85% of human bloods are agglutinated by anti-rhesus sera, and so labelled Rh positive. The remaining 15% are not so agglutinated, and therefore are labelled Rh negative. Landsteiner and Wiener explained intragroup transfusion reactions by showing that Rh positive bloods were antigenic in Rh negative persons, and would generate anti-Rh sera in such persons. A second transfusion of Rh positive cells to such a person, and hemolysis might result. Interestingly, a vigorous in vivo hemolysis was not necessarily accompanied by vigorous reaction in the test tube, and to demonstrate the existence of Anti-Rh bodies, agglutination must be carried out in the ice box. Wiener and Stetson shortly noted that whereas the proportion of the general population that is Rh negative is but 15%, but mothers of babies with erythroblastosis fetalis were 90% Rh negative. Investigation quickly showed that the necessary relationship was an Rh positive fetus in an Rh negative mother, and that trans-placental iso-immunization led to the elaboration of anti-Rh bodies in maternal blood, with consequent hemolysis in the infant. It has also transpired that the 10% of mothers of erythroblastotic infants who are Rh positive, may possess antibodies for Rh negative blood, or for the fetal Landsteiner A or B group in extremely high titer, or for an increasing alphabet of so-called "irregular agglutinins." We look to the future to explain some of the maternal hemolytic anemias seen during pregnancy on the same general basis.

j. THE REMAINING GROUP IS CONCERNED WITH ERYTHROPHAGOCYTOSIS. Acute febrile illness leading necessarily to death in a short space of time are associated with the findings of an acute acquired hemolytic anemia. At autopsy generalized erythrophagocytosis is present throughout the reticuloendothelial system by histioeytic cells. These cases are rare. It is not clear that they represent a primary retienlosis, i. e. a disease innately of the retieulo-endothelial tissues, but this has been the generally expressed view among those who have met with the disease.

STEPS NECESSARY IN THE ANALYSIS OF A CASE OF HEMOLYTIC ANEMIA

1. The status of microspheroeytosis, macrocytosis, and reticulocytosis is established.
 Diagnosis of congenital hemolytic anemia can usually be made at this point.
2. Fragility test is done. The results can usu-

ally be predicted from the appearance of the smears, but generally in the familial congenital hemolytic we expect to find increased fragility.

3. Tests for auto-hemolysis and auto-agglutination are carried out by suspending 2% of patient's red cells in patient's serum and observing after one hour for hemolysis and, or, agglutination, at room temperature, then at 4C.

 If either phenomenon is present, the titer is determined.

4. If either test is positive, the nature of the antibody is investigated in other bloods of the same group, or in other compatible Landsteiner groups.

5. Hemolysis is tested for (using control) in patient's serum which has been acidified to 0.05% acetic acid.

6. Complete physical examination and associated laboratory tests consider especially the known causes of symptomatic hemolysis.

7. Sternal puncture establishes absence of myelophthisis, and type of erythropoiesis, which should be normoblastic or macronormoblastic.

8. Detailed history for exposure to chemicals, Vicia, Fava, and family history.

SUMMARY

Hemolytic anemia presents an interesting symptom complex requiring exercise of considerable diagnostic skill to allocate the cause, and is a field in medicine in which our knowledge is presently increasing.

THE HISTORY AND CAUSES OF SILICOSIS

JOHN W. FLINN, M. D.
Prescott, Arizona

THE earliest medical writers associated clinical symptoms with the inhalation of dust in occupation, and later the condition was included under the term phthisis, because it was associated with emaciation and expectoration.

In 1902 Haldane and his committee concluded that the phthisis of tin miners was different from ordinary tuberculosis in that "the primary injury to the lungs is due solely to the inhalation of stone dust, but that this injury also predisposes enormously to tuberculosis of the lungs."

In 1915 Collis demonstrated that exposure only to free silica dust was particularly dangerous. In 1924 asbestosis was also incriminated as a second form of dust inhalation disease characterized by fibrosis; but it predisposes to tuberculosis to a lesser degree than silicosis.

In South Africa, serial roentgenography checked with post-mortem examinations established the dual relationship between the infectious process tuberculosis and silicotic fibrosis. The infection may remain latent . . . and modify the amount and form of the reaction to silica dust; or it may itself develop in active but unusually chronic form as a result of the pre-established silicosis.

Today, it is recognized that theoretical knowledge is not yet sufficiently advanced to permit an evaluation of a hazard by mere analysis of dust or rock. The detailed study of the workman and his industrial environment still constitutes the only certain method of establishing the existence of a dust hazard. Animal experimentation is a valuable accessory source of information.[1]

KIND OF DUST

"There are three types of siliceous rock encountered in industry. The first is composed almost entirely of some form of silicon dioxide (sand, sandstone and flint). The second contains silicon dioxide and one or more silicates (granite cutting). The third type is composed of silicates (kaolin, feldspar, mica and talc)." Whether pulmonary fibrosis results from the chemical action or the physical irritation of the siliceous material is still a debatable question".[2]

"Regardless of the machanisms involved, all the experimental evidence tends to confirm the belief that fibrosis is to be expected only from various forms of free silicca and from those silicates which have a fibrous structure i. e., asbestos. The free silica need not necessarily be of crystaline form; one of the amorphous varieites has proved as active as normal quartz, although others were practically inert. A few of the silicates are toxic; others have produced a mild degree of cellular proliferation. If any of them ultimately cause fibrosis, such reaction must be extremely slow in development. Particles of certain other minerals naturally or arti-

ficially associated with free silica delay the development of silicotic fibrosis and modify its form. Whether all non-siliceons minerals may act as inhibitors awaits demonstration. Definite proof of accelerators to the action of silica is yet lacking. . . . It may be stated with reasonable certainty that the mechanical factors of hardness and sharpness play no part in the irritation from particulate minerals. With the fibrous silicates mechanical irritation is strongly suspected, although final proof is still lacking. The validity of the solubility hypothesis to explain the unusual activity of free silica has been questioned".[1]

"The Concentration of Dust Particles in the Air".

"This depends to a large extent upon the type of machine and process used to break up the rock and the precautions taken to moisten the dust immediately after its formation. If the interior of the hole which is being drilled is kept wet the dust turns to mud. Mavrogordato estimated that the dust count of the air in gold mines was twenty milligrams per cubic meter before precautionary measures were instituted in 1912, after which the count fell to one or two milligrams. The Miners Phthisis Commission of 1912 listed machine drilling as the most dangerons of mining operations in the production of the greatest number of dust particles, Tramming came second. hand drilling third and timbering fourth. The process of dynamiting produced a large concentration of dust particles which were thrown into the air at a great distance. In all of these operations, of course, the important factor is the formation of particles small enough to damage the lung."[2]

"Examination of workers exposed to varying concentrations of dust has shown that ten million particles per cubic foot of a dust containing 35% of free silica can be tolerated without danger for a short time. After a longer period of time, however, mild fibrosis results. A low concentration of dust particles containing a high percentage of silica may produce as much harm as a higher concentration of dust with a lower percentage of silica.

Lehman calculated that a dust content of one milligram per cubic meter causes only slight discomfort, five milligrams is tolerable, twenty milligrams is unpleasant, thirty milligrams is irritating and more than one hundred milligrams most disagreeable. Koelsch found that in the porcelain industries where workerrs developed silicosis the air contained from 22 to 26 miligrams of dust per cubic meter."[2]

LENGTH OF EXPOSURE

"The length of time necessary for silicosis to develop will depend upon the character of the dust,. the size of the particles, the number of hours of exposure per day and the concentration of dust particles in the inhaled air."

"According to reports, the length of exposure to dust before silicosis results varies from a few months to twenty years. Acute silicosis would be that form which develops in a period from a few months to four or five years after exposure to dust."

"Gardner, believing that silicosis will develop if a sufficient quantity of fine dust is inhaled over a sufficient period of time, has been able to reproduce in guinea pigs a typical nodular disease in twelve months by eight hours' daily exposure with concentrations of approximately 200,000,000 particles per cubic foot of air."

"Watkins-Pitchford found that the average duration of exposure in the South African gold miners was 9.6 years. Tattersall observed it to be slightly more than ten years in coal miners. Sutherland and Rivers found the minimal exposure to be six years in the stone-crushing industry, and Pataschkowski and Koelsch first observed changes in porcelain workers after ten years of exposure, although it is more frequent after twenty years. Chapman reported three cases of silicosis more marked than usual after exposure to an alkaline dust of silica, respiratory symptoms developing eight, twenty-one and twenty-nine months respectively after exposure. In two of the cases the diagnosis was confirmed by autopsy."

"The size of the particles inhaled greatly influences the time within which silicosis develops. Lanza is of the opinion that the harmful effects are produced when the particles are in a fine state, that is, less than ten microns. . . . Watkins-Pitchford holds that particles gaining access to the lung tissues cannot be much more than 0.5 to 5 microns in size, because the phagocytic cells lining the alveolar wall cannot

engulf larger particles and carry them from the air sacs to the lymphatic vessels."

"The question of the length of exposure is complicated by the fact that pulmonary fibrosis may develop years after men leave their occupation. Britton and Head have reported four cases of men who left their occupation clinically free, and yet many years later developed silicosis. . . . They point out that the process may be one of progressive fibrosis, and that symptoms appear late because of the length of time necessary for the disease to develop. Similar observations have been made by Lawson, Jackson and Gardner. . . . Serial roentgenological study has shown that once pulmonary fibrosis has been established the process is progressive. Since most men have continued their occupation for many years, it is difficult to establish the length of exposure necessary for an individual to develop silicosis."[2]

(1) Gardner, Leroy U., J.A.M.A. 11-19-38.
(2) Auerbach, Oscar, Quart. Bul. Sea View Hosp. 11-36.

"NURSES AND THE WAR"

FRIEDA BRAUN ERHARDT, R. N.
Secretary-Treasurer, Arizona State Board of Nurse Examiners

WHEN we think of War our first mental picture is a Soldier, and somehow we automatically think of his family, so we have the Military and the Civilian picture. War means battle for those things we hold sacred at home, so we have the Battlefront and the Homefront. War brings heartaches, pestilence, suffering, sorrow, pain, and death, so we have the Doctor, Hospital, Civilian and the Nurse.

The contribution of American nurses to the total war effort in 1943 fully justifies the slogan of the U. S. Cadet Nurse Corps, "Join a Proud Profession." Nursing is a proud profession; proud of its privileges, proud of its service, proud of its heritage.

Never before in our history have nurses individually and as a profession had such opportunities, never before have we been so challenged, and never before have nurses been so humbled.

At long last nurses have "come into their own." We have daily evidence of this in the newspapers, magazines, over the radio, and in moving pictures. But, we cannot rest upon our laurels—our task has just begun.

Nurses as never before are being subjected "to the great decisive test," on the homefront as well as on the battlefront.

What we do today as nurses will determine what we will be tomorrow.

The behavior of the individual nurse today will reflect upon the profession tomorrow.

Read before Arizona Hospital Association, Feb. 25, 1944.

Our accomplishments or failures on the homefront will definitely affect the same on the battlefront.

It is as important to have trained nurses to meet essential military and civilian needs as it is to have men and munitions at the battlefront.

Today, nurses enter the Military service with the relative rank of second lieutenant in the Army and ensign in the Navy. Promotion is given as fast as their training and ability warrant, as positions of advanced responsibility are available.

During 1943 twenty-nine Navy nurses were given citations "for outstanding ability in performance of duty under enemy fire" at Pearl Harbor and thirteen others "for distinguished service" aboard the S. S. "Solace."

The first *woman* ever awarded an Aid Medal is an Army nurse. Two members now have them. Two others have Soldier's Medals. Not less than six have been awarded the Legion of Merit. One has been awarded the Purple Heart. And, for the first time in our history an Army hospital has been named for a nurse.

The nurse on the homefront has not been privileged to experience the thrill of enlisting, taking the oath, the feel of an attractive uniform, nor the glamour of it all. She has, however, come forth to give freely of her time and effort. Of the nurses teaching Red Cross Home Nursing last year 83% were volunteers, and they taught 77% of the 37,000 classes. Of the

2,846 instructors for Nurses' Aides approximately 1,700 were volunteers.

Many hundreds of nurses have given many hours of time to the organization of units of the civilian defense program. Staff nurses, teachers, and administrators have all been carrying a heavy burden.

Statistics from the National Survey of Registered Nurses, U. S. Public Health Service, 1943, are briefly as follows:

Total number nurses responding	259,174
Active	170,599
Inactive, but available	37,146
Inactive, not available	49,829

National Survey in Arizona:

Total number Arizona nurses responding	947
Active	649
Inactive, but available	148
Inactive, not available	150

Survey does not include over 36,000 nurses in military service. Another 36,000 must be recruited by June 30, 1944.

During 1943 American Red Cross reports 22,956 nurses enlisted, a little over 5,000 short of the quota. Arizona's quota was 173. 110 enlisted. Our quota may have been slightly high if the number of nurses here for health purposes is taken into consideration. This is not an excuse, but a fact.

The U. S. Cadet Nurse Corps is in its infancy. 65,000 students must be enrolled. Of the 1,307 schools of nursing in the U. S., 1,025 have submitted applications under the Bolton Act. 917 of these schools are receiving allotments as of November 12th.

Arizona at the present time has four (4) training schools, each of which has submitted applications and has been approved under the Bolton Act. Students admitted to date under this plan total 215.

That we are faced with problems locally is evidenced in a recent report of the Nurses' Official Registry, District No. 1, which covers Maricopa County, and this represents but one phase of nursing service.

Registrants are listed as follows:

1.	Health Seekers (45 for self - 15 for family)	60
2.	Established Homes	29
	(with children	14
	with husband	3
	hoping to retire	12)
3.	Wives of Service Men	9
4.	Military Service (Called to Army & Navy)	4
5.	Over 60 years of age	3
6.	Others	12
	Total	117
	24 of these left	24
	Leaving	93

A committee of the nursing and medical professions met to discuss the situation, and the following suggestions were made:

1. That some method be taken by the District to advise each member of the Maricopa Medical Association of the present shortages and to ask for their cooperation in explaining to their patients the shortage of nurses.
2. That the nurse in each hospital who is responsible for calling of private duty nurses be judge of whether or not private duty nursing service is essential to the recovery of the patient.

There can be no doubt in our minds that as soon as the procurement and assignment committees begin to function some of our problems will be met—but this will take the cooperation of every doctor, nurse, hospital, and civilian. It is a tremendous challenge, but if executed with courage, justice, and goood will, nursing as a profession will gro win stature and will be privileged to retain its right to self-direction. The homefront must make the sacrifice.

The nurse knows the fine balance between life and death, and seeks always to tip the scales in favor of life. Today she can fight for the life of our Nation as well as for the lives of our fighting men.

We need courage, inspiration and faith.

We are a proud profession—Victory is in our hands.

Cancer Section

TREATMENT OF EPITHELIOMA OF THE LIP

LUDWIG LINDBERG, M. D.
Tucson, Arizona

That cancer is curable when treated in the early stages, as frequently stated in the Cancer Educational Campaigns, is well demonstrated in cancer of the lip.

In a review of 96 cases of lesions of the lips observed during the past seven years, there were 47 squamous-cell epitheliomas of the lower

lip and 5 of the upper lip; also 35 cases of keratosis or leukoplakia (exclusive of cheilitis exfoliativa), one hemangio-endothelioma, and 8 basal-cell epitheliomas of the upper lip.

Age:—In this series of epithelioma of the lower lip, the youngest patient was 28 years old, the oldest 84, and the average age was 51. The incidence was highest between the ages of 30 to 60, peak between 40 and 50.

Location:—The left lower lip was the site of cancer in 22 cases; right lower lip in 15; and centerr of lip in 10.

Duration:—The duration before treatment could be estimated in 34 cases: 15 patients had the lesion for one or more years; 19 patients had the lesion 1 to 10 months. The average duration was 14 months.

Size of lesion:—The majority of the epitheliomas of the lip varied from 0.5 to 2 cm. in diameter. In 6 cases the lesion was 2 cm. or larger.

Diagnosis:—Thickened lesions with induration from invasion of the submucous tissues were clinically diagnosed as epithelioma. Biopsy was performed in all but the smaller lesions and showed squamous-cell epithelioma, grade I or II.

Method of treatment:—Patients with epitheliomas less than 2 cm. in diameter were treated with surface application of radium given on two successive days; the dosage varied, but most frequently 300 to 400 mg. hrs. These lesions cleared up without defects and the results were most satisfactory to the patients. Four patients were treated with x-rays alone; they are all well. Two extensive lesions had interstritial radium with good results.

Six patients with lesions 2 cm. or larger:—

1-N. One had extensive involvement of the lower lip, a big hole in the cheek, and fixed submaxillary nodes; no treatment given—hopeless and life expectancy one month. He gave a history of having had radium and x-ray treatments periodically for the past six years—this is probably an instance where irradiation was carried on too long without reverting to surgery.

2-V. Duration 2 years; ulcerated epithelioma 2.5 cm. in diameter; had 12 x-ray treatments elsewhere. He was given 400 mg. hrs. of surface application of radium with the cross-fire method. He did not wait for the radium to act but went to a surgeon who did a V-resection of the lip and immediately resected all the nodes on one side of the neck—the nodes were negative but metastases and the neck resection was unnecessary.

3-P. Duration 10 years; had x-ray treatments elsewhere. Now has a deep fissure in lip with indurated edges. After 550 mg. hrs. of radium application failed, an extensive V-resection was performed with good results.

4-K. Ulcerated epithelioma of left lower lip, 2.5x1 cm., of 2 years duration; nodes not enlarged. Treated with surface application of radium, 525 mg. hrs., with good results.

5-B. Treated by an osteopath for nine months. Now the cancer involves three-fourths of the lower lip, around angle of mouth to cheek and upper lip, and one hard node in the submaxillary region fixed to the mandible. In two separate sessions this patient had a total of 1872 mg. hrs. of interstitial radium supplemented with a total of 554 mg. hrs. of surface application of radium. The submaxillary node had 576 mg. hrs. of interstitial radium followed by 6,000 r of x-ray therapy, after refusing surgical removal of the metastasis. He has now been well one year with good cosmetic result.

6-M. Squamous cell epithelioma, grade II, in center of upper lip for 8 months, is now 2x2x1 cm. Treatment was interstitial radium, 12 2-mg. needles left in situ for 119 hours, giving a total of 2856 mg. hrs. Now well for about 18 months.

One P. O. recurrent hemangio-endothelioma of the lower lip healed after biopsy and radium treatment; now well 4 years.

Recurrences, 7 cases:—Two were post-operative recurrences, and one each recurrent after use of either electric needle, radium, or x-rays; these five cases were treated successfully with radium. In one old recurrent case surface radium failed, and cure affected by V-resection. One was recurrent after repeated doses of x-rays and radium—now inoperable and hopeless.

Complications:—Infected lower front teeth were often encountered—probably an etiologic factor. In 7 cases there was keratosis of the lower lip associated with epithelioma. Keratosis of the lip developed after V-resection for

epithelioma in one case. One patient had slight telangiectasia and small area of radio-necrosis after 18 years of treatment; surgical correction was refused.

Metastases:—Most epitheliomas of the lower lip are of low malignancy, grades I and II, a fact definitely established by Broders. The grade of malignancy, as well as the stage of the disease, is an important consideration in planning the treatment. In grades I and II removal of the submaxillary nodes is not indicatted unless there is well-grounded suspicion of metastases. In grades III and IV epitheliomas of the lip, which are rare, metastases to the nodes occur early and frequently, and surgical removal of the nodes should be considered even if the nodes are not enlarged and possibly treated in combination with irradiation—in far advanced metastases in these cases, removal of the nodes is usually futile, and irradiation is preferable.

Results:—Of the 35 patients with keratosis of the lower lip treaed with x-rays, all got a satisfactory result and none have developed epithelioma. Of the 52 cases of squamous-cell epithelioma of the lip, 47 in the lower and 5 in the upper lip, 50 patients are now living and well, and 2 are dead. One now dead was not treated; the other developed cancer in the floor of the mouth.

Conclusions:—Irradiation, preferably radium, gives the best results in treatment of squamous-cell epithelioma of the lip, of small to moderate size. In large ulcerated lesions, and neglected cases, various combinations of irradiation and surgary have the best chance of obtaining a good result.

Although there is an acute shortage of medical doctors in civilian practice, prescriptions filled by the nation's druggists raeched a new high in 1943, Dr. E. L. Newcomb, executive vice president of the National Wholesale Druggists' Association, revealed today.

"The volume of drug prescriptions, which normally totals about 200,000,000 a year, was more than 230,000,000 in 1943," said Dr. Newcomb, who interpreted the rise as an indication that the American people are using some of their increased earnings to purchase more adequate medical care.

PENICILLIN RESEARCH NOW BEING SPEEDED BY ELECTRON MICROSCOPE

The electron microscope, which is being used in increasingly diversified fields of scientific research, is now being employed in advanced development of processes to help speed mass production of penicillin.

This project of vast scientific importance is being pushed by chemists and bacteriologists in the Lawrenceburg, Ind., research laboratories of Schenley Distillers Corporation, whose converted whiskey distilling facilities for almost two years have been devoted exclusively to the wartime task of producing industrial alcohol for smokeless gunpowder, synthetic rubber and other priority products.

The electron microscope recently installed in the laboratories, similarly is expected to play a "tremendously important" role in other wartime researches being conducted by the company, as well as in production of the life-saving "miracle drug", according to Carl J. Kiefer, vice president in charge of production and research.

The delicate instrument is expected to be of "immeasurable value" to the researchers in extending investigations of fermentation in the production of the war alcohol and in expediating the solutions of other problems of mycology, the science of fungi, he said.

"It should prove to be especially useful, for instance, in our studies of yeast, which change grain sugars into alcohol, and in similar research on the vitamins which enrich livestock and poultry feeds processed from the residues of this same grain," Kiefer declared.

The scientific virtue of the electron microscope is its inanimate ability to "see" beyond the range of light waves. The device's high-speed electron waves, while too short to be visible to the human eye, cause micro-organisms and other tiny particles to produce images on a fluorescent screen. These images are visible and can be photographed.

Optical lens microscopes magnify objects about 2,000 times, or 3,000 times if ultra-violet light is used. The electron microscope, however, makes direct magnifications of 10,000 to 30,000 diameters. By use of photomicrographs, magnifications up to 100,000 and even 200,000 times life size are possible.

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Editorials

The Economic Front

It behooves the rank-and-file physician to familiarize himself with developments along the medical economic front, because in the near future he is going to be compelled to make certain decisions, and these decisions will be in the nature of financial aid to the forces working to preserve our system of Private Medical Practice. It is true that to date there has been so much talk and so little action that the average physician has been more or less disgusted and too busy to try to decipher what has been going on. The Officers of our Societies have been constantly faced with these problems and have felt duty-bound to use their allotted time at Society Meetings to present the questions for discussion. And our medical journals have been more or less cluttered up with discussions and editorials dealing with the same situations. And through it all the rank-and-file physician has been at a loss to see any answers to all the talk, and so has refused to give it much of his thought. But action is beginning to take place, as some very definite answers have been arrived at, and some very accurate knowledge has been acquired. Everyone is familiar with the criticisms which have been aimed at the American Medical Association for a number of years. That it has refused to accept the leadership of the Medical Profession along economic lines, has been complacent about recognizing the dangers facing the Private Practice of Medicine, and that it has failed to accurately inform the Profession on these questions. The American Medical Association has steadfastly insisted that it is a Society organized exclusively for scientific purposes, that its charter definiely forbids it from engaging in any political acitvities, and prohibits anything in the nature of a lobby for legislation. So for the purpose of performing the functions of a Public Relations Organization, the National Physicians Committee was formed some five or six years ago. While many prominent members of the A. M. A. constitute this Committee, there is definitely no other relation between the two organizations. During these five or six years The National Physicians Committee has gone along doing its job, but without making much of an impression on the rank-and-file medical man.

One of the most insistent demands coming from various sections of the country in the past few years has been for the establishment of some form of office in Washington, D. C. which would represent Organized Medicine. The A.M.A. continually refused to heed this demand. And the NP.C. could see no need of it in the work they were doing. This demand became so insistent that at the meeting of the House of Delegates of the A.M.A. in Chicago in June of 1943, The Council on Medical Service and Public Relations was set up. Of course the introduction of the Murray-Wagner-Dingall Bill in Congress was the incentive for urgent action. But the new Council was slow in getting started. And up until after the first of the year it refused to consider on office in the National Capitol. From the California Medical Society has come one of the loudest demands for action, and after calling representatives from eleven Western States the United Public Health League was organized, which at present represents six Western States. This League has been explained in recent issues of this Journal. Sparked by Ben Read, who has been employed by the California Medical Society for years, and has had extensive experience in medical legislation, this League has opened an Information Office in the National Capitol. In February of this year a Conference of the Medical Service Organizations from over the country was held in Chicago. Probably the highlight of this meeting was a speech delivered by the Honorable W. H. Judd, Congressman from Minnesota, a synopsis of which is printed elsewhere in this issue. After this meeting, the Council on Medical

Service and Public Relations announced their decision to open an Information Office in Washington also.

This whole subject came up for general discussion in the House of Delegates at the Annual Meeting of the State Society. To summarize the general discussion, (1) the members of the profession are still looking for the correct answer to the many questions which have been raised, (2) they rather regret the decision of the A.M.A. in remaining aloof, (3) they hope that these organizations set up by the A.M.A. will accomplish the desired results, (4) they wonder what the status of The National Physicians Committee is, (5) they want and demand more action.

On account of this latter point, they voted unanimously to support the United Public Health League for a period of a year. This meant that they authorized the State Treasurer to pay an amount equal to three dollars per member for all members of the State Society. This will be done without extra assessment on the members.

Coinciding with the announcement of the opening of these two offices for Information in ths National Capitol, came the release of the report of the Naional Physicians Committee of a nation-wide survey which had just been completed. This survey was conducted by the Opinion Research Corporation of Princeton, N. J. The following are some of the high-lights of the poll. (1) 16% of the American people favor a 6% deduction from salaries and incomes to pay for medical care, but 84% are unwilling to pay the cost of a federal health system. (2) 63% of people do want some form of prepayment sickness insurance. (3) 79% have "their doctor" (in contrast to any doctor) whom they call in case of illness. (4) 81% felt they had a doctor who had a personal interest in them. (5) 77% of people indicated that their doctor's charges were reasonable and satisfactory. (6) 90% of people who belong to some form of voluntary prepayment health insurance feel that they are better off than their friends or relatives who do not belong. (7) In areas where prepayment plans are in operation about 75% of physicians in these areas believe the public is better off than if the plans were not in existence. (8) About 75% of people would go to the same physician as they did previously. (9) Less than 25% have heard of a plan by the federal government to increase social security taxes to pay medical and hospital bills.

With the above information the N.P.C. believe they have found the answers to the problems of adequate medical care, and the equitable payment of medical and hospital care. They estimate that at the present time about 25,000,000 people are benefiting by voluntary prepayment medical care, and point out that this must be extended to 100,000,000.

This report has received very favorable comment and praise by the entire medical press from all over the nation.

The N.P.C. have now decided to spend $500,000 a year for the next three years in a program to encourage the medical profession to take active part in the formation of voluntary prepayment sickness plans, and the education of the public (both employers and employees) of the benefits to be derived from such plans.

As has been announced earlier in the year the Maricopa County Medical Society made a special levy of $10.00 per member to be donated to the National Physicians Committee.

Medical Libraries in Phoenix

The time when a medical library was adequate has long since past, but the need for such a library is greater than ever. Medical discovery and research has expanded to the point where the busy physician finds it impossible to keep abreast of new treatments and technics as well as the improvements in current methods. Consequently, medical libraries are now on a cooperative basis. That is, several physicians practicing together in one building or a unit of physicians such as a medical society will contribute to the upkeep of a medical library. Or, such a library may be an important part of a well organized hospital.

In any event, the care of the books and journals is made the work of a trained librarian. She will organize the tremendous quantity of medical information being published so the busy physician can get the data on a particular subject at the time he is in most need of that data.

There are two separate medical libraries in the city of Phoenix—that of the Maricopa County Medical Society and the one at the Lois Grunow Memorial Clinic. The respective librarians are cooperating with each other in the efforrt

to give the physicians and surgeons of Arizona the finest in medical library service.

There are many ways of giving this service, but at this time we will discuss just one of the prerequisites that are necessary. That prerequisite is a complete and extensive book and journal collection. For an instance, the request may be for the Pribram technic for dissolving gall stones, or, let us say, other cases in literature of sarcoma of the diaphragm. In order to answer the first reference it is necessary to have among other journals the English "Lancet." The answer to the second necessitates a search through years of back files. And there is nothing more disconcerting than to have a long run of a journal only to go to the shelf to discover the particular issue containing the answer is missing.

Books and journals comprise the stock from which librarians draw and, without a complete and extensive stock there can be no adequate medical library service. Miss Kelly, of the Maricopa County Medical Society Library, and Miss Caruso, of the Lois Grunow Memorial Clinic Library, are urging physicians and surgeons to offer back files of journals to either library before discarding. It is immaterial to which library you make the gift as the librarians supplement each other's stock by interlibrary loan. The important thing is to have the material in one or the other library. Since both libraries have plans for binding journals, your contribution will become a permanent and active part of a medical reference library.

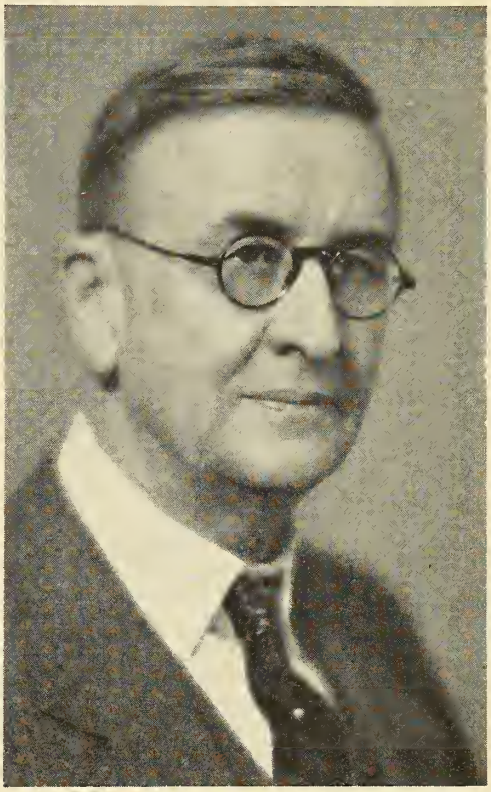
The finest in medical library service does not comprise in asking a physician to wait for information. The answer must be in the library when the doctor needs it.

MARY ELSIE CARUSO
LORAINE M. KELLY

Review

Quarterly Review of Surgery was recently added to surgical literature in order that many important surgical articles published in all parts of the world could be presented in an abbreviated form to the busy surgeon who has little time to read the many important but voluminous articles that should come to his attention. Many such articles are published in foreign languages so the problem of translation is frequently difficult. A careful reading of the first issue proves that the articles for abstraction have been carefully selected and cover a wide range of surgical subjects. Also the editorial board contains the names of some of our best surgeons, therefore, it should present the best abstracted surgical articles to be found in medical literature.

E. PAYNE PALMER.



Willard Smith, B. S., M. S., M.D., F. A. C. S., Surgeon

In the death of Willard Smith, of Phoenix, on March 25th, another notable figure in the ranks of Arizona medical men finished his earthly work and passed from the scene. With the exception of a short period of practice in Oregon, Dr. Smith's whole professional career was spent in Phoenix, where for more than thirty-five years he was a leading surgeon, entirely devoted to his professional work, with only academic interest in other social and communal activities.

Willard Smith was born in Creston, O., on January 1, 1876. His father died when Willard was a boy and his mother married again and moved to Oregon in 1891, where the son worked for some years and then entered the Ore-

gon State College from which he took his degree in mechanical engineering in 1895. He then entered the Cleveland-Pulte (Homeopathic) Medical College in Cleveland, O., from which he graduated in 1898. During his medical school years he prepared a thesis on mechanical engineering on the basis of which the Oregon State College conferred the Master's degree. After a year's internship in the Huron Street Hospital in Cleveland, Dr. Smith entered the Jefferson Medical College in Philadelphia, from which he graduated in 1900.

He was married to Miss Elizabeth Aves, of Norwalk, O., on December 26, 1901, and the young couple went to La Grande, Oregon, where Dr. Smith started his professional work. He had established a very successful practice, ranging far and wide from this home base, when this was interrupted by the lung infection which brought him to Phoenix in 1906. He lived on the desert east of Phoenix, where he directed his own regimen of living, with the help of his devoted wife, until health was regained. Realizing that he could not stand the rigors of the climate in Oregon, he decided to locate in Phoenix and opened his office on West Adams St., in the fall of 1908. From the very outset, his unique personality, matchless technical skill and absolute devotion to his work and his patients, placed him in the front rank of Arizona surgeons. He was in the first group from Arizona who entered the American College of Surgeons, and his practice was always in line with the highest ideals of that organization. As a member of the Maricopa County Medical Society, Arizona State Medical Association, Southwestern Medical Association and the American Medical Association, he was a faithful attendant at their meetings through the years. As a Fellow of the College of Surgeons, he served on their Credentials Committee. He was elected to and served in the offices of president of the Maricopa County Medical Society, and of the Southwestern Medical Association.

Outside of his medical society affiliations, Dr. Smith maintained a deep interest in the Masonic Order, being a member of the Blue Lodge of La Grande, Ore., of the Scottish Rite in Tucson and the El Zaribah Shrine in Phoenix. He was a profound student of the Masonic philosophy and took seriously the teachings of that Order about personal righteousness and belief in God. Though not a member of any church in Phoenix, few church members have a profounder knowledge of the Bible, a copy of which he kept on his desk, not for ornamentation, but for reference and serious reading. Also there are few church members who can excel his record of love for and fair dealing with fellowmen, or who can show a cleaner record out of truthfulness, faithful friendship, or ethical conduct.

In the fall of 1927, Mrs. Smith suffered a paralytic stroke from which she never recovered. For more than five years, until her death in 1933, Dr. Smith was in constant attendance upon her, and his personal devotion during this period, while still carrying on his heavy practice, was a constant marvel to every one. After her passing, Dr. Smith entered upon what he called his "period of waiting for the call". He continued his practice, faithful to his professional duties and to his patients, though growing less active through the years, until finally the "call" came and he laid aside his earthly duties and entered into a well deserved rest. The immediate cause of death was cardiac decompensation, the final result of heart conditions which had been present many years.

Dr. Smith has no immediate surviving relatives, the family group for his funeral service being composed of his physician, Dr. A. M. Tuthill, a few of his closest friends through the years, with his household and office assistants for whom he stood in real fact in loco parentis. There is an aunt, a nephew, and some cousins, all of whom were unable to attend the funeral.

He wrote few medical papers, but whenever he appeared on a medical program it was by invitation and the result was a scholarly, pungent and fearless statement of his experience or convictions. One of his best remembered papers was the one on chest surgery. It had no heading, but the opening sentence read, "The title of this paper will be found in the middle." Near the middle of the paper he stated his theme, "Tuberculosis is a Surgical Disease." The paper set forth his belief, based on observation and experience that surgery could reclaim otherwise hopeless cases of tuberculosis. This was in the pioneer days of chest surgery and since that time we have seen phrenicectomy, scalenectomy, thoracoplasty, lobectomy, and other surgical procedures come into their right-

ful place in treating lung tuberculosis. Dr. Smith was the surgical consultant for the first cases of pneumothorax treated in Arizona, and used the procedure during the succeeding years.

His early work in mechanical engineering stood him in good stead in his later surgical practice. He was little short of a genius in applying mechanical principles to surgical repair work, and there are many patients in Phoenix today with reconstructions of essential organs for which there is no description in text books or medical literature. He had a profound knowledge of anatomy, kept fresh by constant study of the skeleton in his office, which never gathered dust, and by constant reference to the latest works on anatomy. His medical magazines were chiefly surgical and they were carefully and faithfully read. He did not pretend to keep abreast of every branch of medicine, preferring to keep the pathway of his knowledge narrow so that it might cut more deeply into what was useful to him.

Socially, Dr. Smith was somewhat of a recluse, but this was due to the realization of his physical limitations and a determination to husband all his strength for his professional work. His fixed orbit included office, hospital and home. A highly valued member of the Staff of St. Joseph's Hospital for more than thirty-five years, he was, at the time of his death, an honorary member of that Staff. His group of intimate friends was not large, but those who enjoyed the inner circle of his regard, admired and loved a unique personality, a faithful and unswerving friend to them,—and we will ever hold him in grateful and affectionate memory.

W. W. WATKINS.

Expert Testimony by Congressman Judd

The following article is a brief digest of an address made by the Honorable Walter H. Judd of the Fifth Minnesota Congressional District, one of the seven physicians in The Congress at Washington, D. C., made before the National Conference of Medical Service held in Chicago in February. It is reprinted from Minnesota Medicine. It was probably the deciding evidence on which the Council on Medical Service and Public Relations were convinced of the necessity of establishing an office in the National Capitol.

The Doctor's Problem

The doctor's problem, like the businessman's problem has changed, Dr. Judd said. Once, the businessman's problem was chiefly financial. Then it became a matter of production and distribution. Then it was labor. And now, as government reaches farther and farther into the life of every citizen, it is government, itself, and business must of necessity have somebody constantly in Washington to work with government and government agencies.

So, in medicine, the physician's problem once was curative medicine. Then it was prevention of disease. Next it became a problem of devising and employing new techniques for distribution of medical service. Now it is also government, and the problem of handling Congress and the government bureaus must be tackled by the doctor as well as the businessman.

As doctors, we are trustees of a magnificent heritage. But we are now in a great national crisis and great crises tend to show our strength and our weaknesses.

We Never Stood Higher

It is my belief that medicine never stood higher than it does today, so far as scientific achievement is concerned. It never stood higher so far as patriotism goes. The readiness of so many of its practitioners to go into the hardest kind of military duty without any compulsion whatever except the desire to serve has surprised Washington. But the national crisis has brought home to many the fact that medical services at home are inadequate in quantity and their distribution imperfect.

When there are inadequacies in any essential goods or services, rationing is necessary. Without it you may have a situation in which the best and most medical services go to the highest bidder and that is a thing which we must avoid.

We must find a way to extend good medical service to everybody, not only because medical service is an essential, but also because a way to do it will certainly be found by somebody, if not the physician, and that way may not be to our liking.

They Do Not Comprehend

There are people now who have a program designed for that purpose. They acknowledge that 80 per cent of our people have good medical care, better care than any people anywhere in

the world. It is a fact, however, that we doctors tend to emphasize the excellence of the care given to the 80 per cent and forget all about the other 15 to 20 per cent; while these other people emphasize the troubles of the 15 per cent and are perfectly willing to scrap the whole system which now takes excellent care of the great majority for the sake of the unfortunate 15 per cent. Mostly, I believe, these people are sincere. They simply do not comprehend what are the basic essentials of good medical service. But they do have access to the agencies that supply information to the country and to the machinery that gets legislation on the statute books.

Must Come from Within

We doctors know that three basic principles must be maintained and perpetuated if medical service is to continue on a high standard in the United States. First, the service must be voluntary. Second, it must be personal and direct between doctor and patient. Third, there must be a constant stimulus to advancement. It is up to us, therefore, to find a solution to problems of quantity and distribution from within which will preserve those principles. If we do not, the solution will be found from without and quality will suffer.

Obviously we must work out our own plans, and, equally obviously, we must sell them to Washington. To do that we must have, first, a better liaison with Washington.

We Cannot Wait

We all agree that it would be a good thing to have a Department of Health in the cabinet. But the way to such a re-organization is long and difficult and we cannot wait for it. What we need now is a two-way information bureau. Not a bureau which distributes information according to your prejudices; but a source of factual, unprejudiced information which will originate in Washington, itself, and which will be available at all times to members of Congress.

It is true that there are seven doctors in Congress, but these seven doctors cannot do the job for you. They lack the time to ride herd on legislation and anyway they were not sent to Washington to represent medicine alone, but all the people in their constituencies. If they were to attempt to assume the responsibility for the medical profession they would soon be known as "plants" and their usefulness would be destroyed. The cultists and the quacks have lobbies in Washington and they are constantly on hand. They slip a word into legislation here, a qualification there, and there is no one to tell the uninformed legislator that these qualifications are injurious to the public welfare.

They Welcome Help

Legislators are human. They welcome help. In fact they often seek it in the interest of public welfare. They would seek it from qualified representatives of medicine if they were there to give it to them when it is needed. There is no lack of dignity, no prostitution of professional standards involved in establishing a bureau openly to give them help.

It is not likely that the Wagner-Murray-Dingell Bill will pass this year. But do not take too much comfort from that. That means that you have a breathing spell now. But it is your last breathing spell. If you do not come through with constructive proposals and constructive help for Congress at once, you will be too late.

Minnesota Medicine.

Right and Wrong Ways of Advising Congressmen

In all probability every physician in Ohio at some time or another has written to his Congressman or his state representative or state senator about pending legislation. Wonder if you've ever stopped to think about the reaction which your letter created?

Writing to the secretary of the Public Health League of California. Congressman George E. Outland of the 11th California District expressed himself on certain medical and health proposals pending in the Congress and then offered some advice which each physician would do well to remember the next time he writes his national or state legislator.

This excerpt from Congressman Outland's letter, published in the *San Diego County Medical Society Bulletin*, is not only timely, but practical:

"Another point which I mentioned in connection with this whole matter has been the type of letter written to my office concerning this particular bill. I welcome communications on this and all other subjects, but I hope that such communications will be helpful and temperate, not simply emotional and intemperate. For example, when a doctor in California writes me (and I here quote verbatim) 'I am violently opposed to this bill; please vote accordingly,' he scarcely is accomplishing his objective!! Letters which are violently partisan in nature or which damn Roosevelt or which refer to any change in the status quo as 'communism' show not only bad judgment but poor taste. On the other hand, some of the most

thoughtful letters I have ever received in Congress have come from physicians and nurses who have objectively and calmly pointed out what they believe to be real dangers in the proposed bill. Such letters are doubly welcome, since they do shed additional light and not heat on a matter that is arousing such intense feeling."

—*Ohio State Medical Journal.*

ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

REPORT OF ANNUAL MEETING

As all know, the Annual Meeting of our Association was held at Phoenix on April 14 and 15. Business sessions were held on Friday forenoon and Friday afternoon, with the Scientific Sessions following on Friday evening and Saturday forenoon and afternoon.

Attendance

There was a good attendance as the registration shows approximately 150 registered in addition to our guests. All members of the Council were in attendance with the exception of Dr. Harold W. Kohl, delegate to the American Medical Association, who now holds the rank of Lt. Colonel with the armed service. Dr. Kohl has leave to attend the session of the House of the AMA at Chicago in June but could not get away for our Annual Meeting. Navajo and Santa Cruz societies were not represented in the sessions of the House nor were any members registered from those societies for any of the meetings. This is regretted but understandable in war times. Among our member-visitors were Col. W. P. Holbrook (Airforce), Capt. J. M. Greer (Navy), Major C. C. Craig (Army), Lt. Paul V. Palmer (Navy), and A. C. Dick, Surgeon Consolidated Aircraft Corp at San Diego, California. We were indeed happy to have these members of our Association with us at this time.

Scientific Sessions

The scientific sessions were held as scheduled, the full program having been published in the March issue of Arizona Medicine. These sessions were of post-graduate quality and commanded a good attendance from those registered. The scientific luncheon was attended by 130 who heard our former president, William P. Holbrook, Colonel with the Airforce, in an informal address on the medical aspects of aviation.

Business Sessions

In the business sessions the annual dues, always an item of interest to the membership, were held at $30.00 per annum in order to give the association a financial basis for public relations purposes.

It was also voted to take membership in the United Public Health League, an organization of the western states. This League has opened an Information Bureau at Washington, D. C., for the purpose of keeping the Congress (especially western representatives and senators) informed on medical matters. Membership in the League will provide a medium in Washington for keeping our Association fully informed on pending national legislation. Conferences leading up to the organization of the League have been reported by our Chairman of the Committee on Public Policy and Legislation in both the January and March issues of Arizona Medicine.

It was also voted to authorize the Committee on Medical Economics to resume a study of hospital and health insurance plans for possible adoption in Arizona. The Associated Hospital Service, as endorsed some two years ago, is still operating but lacks civilian interest to get going. This plan is organized along the same lines as the Blue Cross plans.

The Committee on Public Health Education was authorized to continue and to expand its present radio programs.

It was also voted, in view of important matters to come before the AMA House of Delegates, that we send both the Delegate and the Alternate to this summer's session. Dr. Kohl, now a Lt. Col. with the armed forces, holds over as Delegate through June, 1944 with Dr. Jesse D. Hamer as the alternate. Thereafter, through June, 1946, Dr. Hamer will serve as delegate and Dr. Kohl as alternate.

Election of Officers

The following officers were elected, Dr. Dan L. Mahoney of Tucson being President as elected in 1943:

President-elect....Charles P. Austin, Morenci
Vice President.....Walter Brazie, Kingman
Secretary.....Frank J. Milloy, Phoenix
Treasurer.....C. E. Yount, Prescott
Speaker of the House....F. W. Butler, Safford
Delegate to the AMA (1945-46).....
.....Jesse D. Hamer, Phoenix
Alternate.....Harold W. Kohl, Tucson
Councilor, Central District.....
.....Robert S. Flinn, Phoenix

The following are hold-over members of the Council:

Councilor for Northern District.....
.....Geo. O. Bassett, Prescott
Councilor, Southern District.....
.....J. Newton Stratton, of Safford who was elected to fill the unexpired term of Dr. Austin, elevated to President-elect.
Councilors-at-large..O. E. Utzinger, Ray
Hal W. Rice, Bisbee
E. Payne Palmer, Phoenix

Committee vacancies will be filled at the next meeting of the Council.

Signed
Frank J. Milloy, M. D.
Secretary

PRESIDENT'S REPORT

The president will report very briefly as the Bulletin and then the Journal have carried reports of activities during the year.

As few meetings of the Council have been called as possible for reasons of restricted travel. There have been two called meetings during the year. As many matters as possible have been attended to by mail.

As president, I attended a conference of the western states held at San Francisco in November, at which time the Maternal and Infant program sponsored by the federal government came in for plenty of criticism. The western states want something done about that measure—now referred to as the Emergency Maternal and Infant program for wives of servicemen in the four lower grades of pay. It is desired, above all else, that a direct allotment be made to the soldier's wife for her obstetrical and infant care just as she is given an allowance on which to live. The set fee to the obstetricians and pediatricians doing this work is contrary to medical practice and, I may say, contrary to democratic procedures. This matter will come up for discussion in the House.

I wish to compliment the officers and committees of the Association for their diligent attention to business during the year. All have been on the job at all times. As a review of the year's work I am presenting a summary of committee activities which really reviews the work of the Association as our work is done through our committees under the direction of the Council.

The Council launched an association owned journal this year since Southwestern Medicine was discontinued for the duration at least. Permanent provision for this Journal will be made during this meeting.

The following summary constitutes the main report for our Association; except for reports of the secretary, treasurer, and other officers and councilors.

SUMMARY OF COMMITTEE PROCEDURES AND ACTIVITIES

PROCEDURES:

1. Unless otherwise provided, each committee consists of 3 members, the term of office being 3 years for each member. One term thus expires annually, leaving 2 experienced members as hold-overs.
2. The Council clears all committee programs.
3. The President names the members on the Scientific Committee and the Council at large those on the Non-Scientific Committees. The Council approves all committee appointments.
4. It is the intent of the By-laws that the President direct and be responsible for committee activities.
5. It is the intent of the By-laws that the committee member serving his third year be the committee chairman for that year. As a matter of convenience there are exceptions to this rule.
6. The President names the new member to each committee at a called meeting of the Council immdiately after the Annual Meeting. Committees are then to convene and set up their organization and program for the year. Since travel restrictions are in effect, these matters are attended to by correspondence whenever possible.
7. Committees report annually to the Council and the House. This outline is in lieu of explanation to expedite the business of the Council and the House.

ACTIVITIES:

Committees are divided into SCIENTIFIC and NON-SCIENTIFIC groups. There are 9 scientific committees and 8 non-scientific committees.

It is to be expected that some committees are more active than others, as matters rise and fall in importance.

Following is a report as to the general activity of present committees:

1. THE COMMITTEE ON SCIENTIFIC ASSEMBLY has one specific job to do each year—

namely, to draft the scientific program for the Annual Meeting. The annual scientific program is in reality the annual report of this Commitee which is always under the chairmanship of the President-elect for that year.

2. THE COMMITTEE ON MATERNAL AND CHILD HEALTH serves the State Department of Health in an advisory capacity in its Division on Maternal and Child Health. The present Emergency Infant and Maternal Program under the Government falls within the realm of the activities of this Committee. Any suggestions or complaints on this and any other maternal and infant program should be laid before this committee, both by the profession and by the State Department of Health.
3. THE COMMITTEE ON ORTHOPEDICS serves the State Board of Social Security and Welfare, through its Division for Crippled Children, in an advisory capacity. Policies controlling the Crippled Children's Convalescent Home are approved by this committee. It has been very active in this work since its inception.
4. THE COMMITTEE ON CANCER works in cooperation with the National Committee on Cancer Control and with the Woman's Field Army. A special section on Cancer is beginning with the March issue of Arizona Medicine, our official journal.
5. THE COMMITTEE ON HISTORY AND OBITUARIES has the annual task of memorializing the members deceased during the year. In addition, it is its duty to compile such historical data as it deems within its scope of activities. A good start has been made in compiling and filing historical data at the central office. The Historian serves as chairman of this Committee. Work on historical data will be resumed during the less busy summer months and each member is asked to respond when called on for information needed for the files.
6. THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION is especially busy during a legislative year. This was not a year for the general session of the legislature, and no matters came before the special sessions to claim the attention of our committee. It has been investigating the formation of the western states into the United Public Health League and the report on this matter will claim the attention of the Council and House.
7. THE COMMITTEE ON MEDICAL DEFENSE also has one specific job to do—namely, attention to malpractice suits pending or filed during each year. No new suits have been filed during the currrent year and no court cases have been held or tried. Indemnity insurance rates are a present study of the committee to be reported on later.
8. THE COMMITTEE ON MEDICAL ECONOMICS is active as problems arise. One claiming attention this past year, and solved with equitable satisfaction, was in relation to the Burton-Cairns Hospital at Eleven Mile Point in Pinal County and operated by the Agricultural Workers Health and Medical Association, a federally controlled organization. The Committee now plans to resume its former studies as to hospital and health insurance plans. A sound hospital insurance plan is in effect in the state but has lacked civilian interest and support to date. This plan, THE ASSOCIATED HOSPITAL SERVICE OF ARIZONA, is an approved hospital plan and is organized along the general lines of the Blue Cross Hospital Service plans. A health insurance plan of similar benefits is to be studied again by the committee to determine whether its operation is feasible in Arizona.
9. THE COMMITTEE ON PUBLIC HEALTH EDUCATION has its program of broadcasts under way—the series of 13 transcriptions on BEFORE THE DOCTOR COMES, as prepared by the AMA, continuing from March 18 to June 10. Other projects are being considered for the coming year and a continuance of the broadcasts, come fall.
10. THE COMMITTEE ON EDITING AND PUBLISHING was most active in publication policies for Southwestern Medicine. Since that publication is now discontinued for the duration, the Committee will offer an amendment to revise its duties. The Council tentatively approved the bi-monthly appearance of an official state Journal. This has been published beginning with January, 1944, and is tentatively known as ARIZONA MEDICINE. The amendment to be offered will make full provision for an official association Journal.
11. THE COMMITTEE ON AUXILIARY ADVISORY carries on its work through the central office and continues the policy of providing the Auxiliary with space in any association publication; of printing its official program along with that of the Association, and of supplying it with badges and similar accouterments at the time of the Annual Meeting.
12. THE COMMITTEE ON INDUSTRIAL RELATIONS is one of the most active of the Association. Its specific work is in connection with industrial injuries and workmen's compensation as they affect the physician. A separate report of this committee is available.

This gives us 12 very active committees out of our personnel of 17 committees. The following summary will set forth reasons for the seeming inactivity of the remaining 5 committees:

1. THE COMMITTEE ON SCIENTIFIC EDUCATION AND POST-GRADUATE ACTIVITIES had an excellent program of interchange of meetings between and among the county societies when war and the restrictions of travel came along to interfere. We have been reluctant to call this committee together, due to these travel restrictions, to work out another program with them. However, it might be suggested that an Abstract Section be set up in ARIZONA MEDICINE under the direction of this Committee with articles from leading medical publications abstracted for the consideration of the local societies. A definite program will be worked out for 1944-1945.
2. THE COMMITTEE ON INDUSTRIAL HEALTH made a survey of the silicosis situation and participated actively in the studies leading up to the enactment of the new Occupational Disease law for Arizona.
This Committee will be the medium for reporting the progress of this new law annually to the House as its work embraces Occupational Diseases.

3 - 4. THE COMMITTEES ON SYPHILIS AND DISEASES and on TUBERCULOSIS CONTROL are dependent on the State Department of Health for their programs. Unless the state department has work for these committees to do, there is little they may do alone. The

COMMITTEE ON TUBERCULOSIS CONTROL was consulted by the State Board of Social Security and Welfare in its original policies for the State Welfare Sanatorium. The policies for medical direction at the sanatorium and the fees for physicians doing the work were originally approved by this committee. These two committees are especially set up to serve the State Board of Health as an advisory medium in venereal and tuberculosis programs in the state.

5. THE COMMITTEE ON STATE HEALTH RELATIONS is another committee designed to aid the departments of the state in their medical problems especially as they relate to the State Hospital for the Insane, the State Prison, School for the Blind, Boys' Industrial School, Pioneer's Home, or ohter state institutions. Ways and means should be found for keeping these committees before the attention of state officials so that their advisory capacity will be recognized.

This outline constitutes a general report on Committee Activities for the year ending with April, 1944.

Signed,
O. E. Utzinger, M. D.
President, 1943-1944

SUMMARY OF CASES UNDER OCCUPATIONAL DISEASE LAW

We are very pleased to give you a short resume of the cases handled by the Industrial Commission under the Arizona Occupational Disease Disability Law since it became effective on March 6, 1943.

There has been a total of 139 cases submitted to the Commission under this law. Of this number 48 cases have been accepted by the Commission and benefits both for medical care and compensation have been allowed; 49 cases have been denied; action is pending on 27 cases; and 15 cases were bona fide occupational disease cases but no time was lost.

It would no doubt be interesting to show a break down of the cases under the various classifications:

Silicosis

56 cases of silicosis or alleged silicosis have been submitted to the Commission and claims filed by employees; 15 of these have been accepted and benefits paid; 28 cases have been denied; and decisions have not been made on 13 cases, pending further investigation. Of this total number 23 of the claimants have been seen by one or more members of the board on silicosis and asbestosis appointed by the Commission under the law. If a claimant's record of employment shows that he has been exposed to harmful quantities of silicon dioxide (Sio_2) to harmful quantities of silicon dioxide (SiO_2) dust, for a period of no less than five years in the last ten years in this state, then it is necessary to establish whether he is totally disabled by reason of silicosis, or by reason of silicosis complicated by other disease. This is a decision that rests entirely with the members of the board on silicosis and asbestosis and under the law the Commission may direct an examination of and report upon the claimant by the board of expert consultants, or one of them. If any medical fact be controverted examination by more than one member of the board is mandatory under the law.

The Commission would like at this time to express appreciation for the cooperation extended by the board on silicosis and asbestosis in the handling of claims for silicosis.

Dermatitis

Under this classification 60 cases have been reported to the Commission. The causes of dermatitis reported are very numerous, including oils, lettuce, carrots, chromate paste, soap and other cleaning solvents, dyes, aluminum dust and shavings, paint thinners and other cutting compounds, wave solvents, sweeping compounds, insecticides, and many others. Of the total cases reported, 20 cases have been accepted and medical and compensation benefits allowed; 14 cases have been denied as not coming under the law; 12 cases have not been acted upon, pending further investigation, medical and otherwise, and 12 cases have been closed as no time was lost. 14 of the cases on dermatitis have been seen by the board on occupational diseases, or by a member thereof. Their reports and diagnoses have been of great assistance in determining the compensability of these cases.

You will note in the above classifications a total of 29 cases which have been closed without any benefits allowed because no time was lost. Under the provisions of the Arizona Occupational Diseases Disability Law if an employee is able to continue his work, he is not entitled to medical benefits no matter how long he may suffer from an occupational disease. In other words, an applicant must be totally disabled to be entitled to medical benefits under the law, including first aid. If an employee is disabled for one day he is entitled to medical benefits for that day only. If he is disabled for two weeks the medical benefits must cease at the expiration of that period. The Arizona Occu-

pational Disease Disability Law makes no provision for benefits for partial disability; for this reason it is necessary to close many cases without allowing medical benefits even though the employee has sustained an occupational disease under the law.

The cases reported under the classifications of silicosis and dermatitis cover more than three-fourths of the total reported. The remaining 23 cases of occupational disease may be classified briefly as follows:

Blisters from creosote fumes, rubber boots and tools: 4 cases reported, 3 accepted and 1 no time lost.

Inhalation of obnoxious fumes: 2 reported and 2 denied.

Lead poisoning: 3 reported and 3 accepted.

Injured sesamoid bone: 1 reported and 1 denied.

Burn from sunray and arc welding: 1 reported and 1 denied.

Gastritis and Anoxemia: 1 reported and 1 denied.

Arthritis and neuritis from vibrating tools: 3 reported and 3 accepted.

Photophalmia from flashes arc welding: 1 reported and 1 accepted.

Ulceration from x-ray exposure: 1 reported, not acted upon.

Tenosynoviits from repeated trauma: 3 reported and 3 accepted.

Cellulitis and bursitis: 3 reported, 2 accepted and 1 not acted upon.

The Commission is making every endeavor to administer the Occupational Disease Disability Law in a fair and unbiased manner and each member of the Arizona Medical Association can be of great assistance to us by rendering prompt and complete reports of his diagnosis and treatment. We have already spoken of the cooperation given us by the members of the board on silicosis and asbestosis, and we wish to state at this time that we have had the same fine cooperation from the members of the board on occupational diseases. Each of these boards has rendered inestimable service and to each member we say "Thank you." In the past we have had the same fine cooperation from the members of the medical profession in Arizona and are very appreciative.

There are no doubt numerous questions which will come up from time to time regarding this law and the benefits thereunder. You may rest assured that we shall be glad at any time to confer with any of you, and trust that you will not hesitate to call upon us.

Very ruly yours,

THE INDUSTRIAL COMMISSION
OF ARIZONA
By Ray Gilbert, Chairman.

COMMENTS BY BOARD

At the request of Dr. Utzinger I have jotted down a few notes that might be of interest, especially to those of you connected with industry.

Our Industrial Health Law is still just a baby, having been born less than a year, but is beginning to develop into a real baby.

I have been in Industrial work since leaving my internship and have watched the progress that has been made in the control of accidents. I have seen the Safety First Program come into being and have watched the wonderful results obtained following the intensive instruction and application of safety measures.

I have seen cases of silicosis develop, some not causing any symptoms, clear through to the stage of massive conglomerate areas as shown in the X-ray films, while others have gotten mixed infections and their careers were terminated rapidly.

Our Organization started many years ago, to make dust counts and eliminate the hazards from that source, impinges were acquired—counts were made; better ventilation and fans were installed. The employees paid very little attention to it, but since the advent of the occupational disease law, employees are becoming very dust conscious, so much so that there are some hazards created, among them emotional hazards. Hardly a day passes that we do not have two or three cases come in, insisting that they be examined for Silicosis. Maybe they have only been working in industry for a few weeks or months and have not been exposed at any time to Silican Dioxide, but to harmless dusts or fumes. Most of them are sincere and it takes quite a lot of time and an x-ray to relieve their anxiety.

Now we are 100% for the new law as it will bring the Employers and the Employees to a better understanding. It is going to make better working conditions for the men as well

as bring the Employment and Medical Departments in closer cooperation for the better placement of new and old employees. There are going to be numerous difficult problems to be faced by the Industrial Commission and it will require a constructive, educational program for the doctors over the State. As I understand it, very few have had the opportunity to see many cases of pneumoconiosis in private practice.

So if we in Industrial work could start our educational program with employees and the Medical Societies produce a few papers along this line, it might help our Industrial Commission over a difficult period in obtaining equitable settlements of these cases until everything is on a smooth running basis.

CHARLES P. AUSTIN, M. D.
Member of Board on Silicosis and Asbestosis.

ANNUAL REPORT COMMITTEE ON INDUSTRIAL RELATIONS

For the year 1943-1944, the Committee on Industrial Relations has held eight meetings as follows: May 2, 1943; June 6, July 11, Sept. 12, Oct. 3, Dec. 5, Feb. 7 and March 5. The final session for the current year, as the term of this committee expires at the time of the Annual Meeting which, this year, will fall on April 14 and 15, is now being held on April 3, 1944.

With the beginning of this year, Dr. Warner W. Watkins, who had served as secretary to the committee since its inception, resigned because of strenuous duties, and the undersigned was named to the secretaryship for the Committee.

There are no set terms for the membership on this committee, the President of the Association being free to name the entire committee annually, to retain the entire personnel, or to make such changes as necessity warrants. It is required by the By-laws to make at least one change annually. The President of the Association makes the appointments to the Committee, the Council voting its approval or disapproval. By the By-laws of our Association, membership on the committee is to number five, with each of the three districts of the Association represented in his membership. The President and Secretary of the Association are ex-officio members of this as well as other association committees.

The Committee on Industrial Relations is therefore responsible to the President and the Council of the Association, for its acts, with annual reports also to be submitted to the House of Delegates.

On the other hand the Medical Advisory Board is named by the Industrial Commission of Arizona and is responsible to that body for its acts and reports.

This report, therefore, is for the Committe on Industrial Relations and does not review the findings and work of the Medical Advisory Board.

It has been customary, in the past, for the Committee on Industrial Relations to meet on he first Sunday of each month, with the month of August usually taken as a summer recess. This year, due to the conditions of travel and hotel accommodations, the Committee on Industrial Relations has met only at such itmes as business warranted, the first Sunday in the month being devoted to such called meetings, with two of our sessions held during the noon hour on the first Monday of the month instead. Since it is usually customary for the personnel of the Industrial Relations Committee and the Medical Advisory Board to be virtually the same, this has proved a good arrangement to date.

Eight meetings of the Industrial Relations Committee were therefore held, as stated before, rather than the customary 11.

Attendance at the meetings has been excellent, only such absences occurring as necessitated by absence from the state.

Members of the Industrial Commission of Arizona are notified, through their chairman, of the meetings of our committee so such members of that body may be in attendance as business demands. The chairman of the Commission has been in 100% attendance, as has their Claims Manager. This is an excellent record and one that is appreciated by the committee.

The attendance record is filed with this report.

THE GENERAL BUSINESS of the committee deals mainly with questions arising as to medical treatment and fees charged, our committee recommending to those concerned any procedures found necessary in these respects.

It might be said here that during the early years of this committee, much time was consumed in getting the profession to understand the scope of treatment in range with compensation procedures and the proper fees for such treatment. There has always been a specific fee schedule, but there has been some difficulty in the past in hewing to the line in this respect especially as to length of time treatment was in order. There are not these difficulties at present as procedures are now well understood by the physicians over the state.

Scientific questions arising before our committee during the past year have dealt mainly with: 1. fractures in which problems of treatment arose; 2. recurring hernias; 3. physiotherapy treatments and a proper fee for the same; 4. permanent partial disability; 5. light employment for those not able to resume full employment, the problem here being to get the employer to provide such light employment until the patient could resume his full-time job; 6. the problem of the scarcity of x-ray films; and, 7. advance notification on the part of the community physicians before sending their patients to the Phoenix examining board or advisor. On this last point it was found that patients would arrive in Phoenix without advance notice and the subsequent delays and inconveniences were found to be quite annoying to all concerned. This problem has been remedied to a great extent as travel conditions also necessitate knowing in advance whether the patient can be seen when he reaches Phoenix.

The May meeting was that of organization as the committee met for the first time with its new personnel. The Membership of the Committee was comprised of Drs. A. C. Carlson of Jerome (northern Dist.), Meade Clyne of Tucson (Southern District); Jas. Lytton-Smith of Phoenix (Central Dist.); John W. Pennington of Phoenix (Central Dist., and C. E. Yount of Prescott (Northern District). The President and Secretary of the Association are ex-officio members. Dr. James R. Moore of Phoenix has been the acting Medical Advisor for the year, as named by the Industrial Commission. There has been no active medical advisor for the season. The work of Dr. Moore has been sincerely appreciated by our Committee throughout the year.

At the May meeting, the new occupational disease measure was discussed in relation to compensation as a matter of interest rather than business. We were advised by Mr. Gilbert, Chairman of the Industrial Commission, that the Utah fee schedule for occupational disease compensation would be followed as a matter of trial for six months to a year, and that in those cases where Arizona had a higher fee the same would prevail over the Utah rating. Some occupational dermatitis that was prevalent at the time was also discussed as a matter of interest.

The June meeting of the committee was devoted largely to adopting a resolution, proposed at the May session, expressing the deep appreciation of the Committee and the Commission for the long and devoted service of Dr. Warner W. Watkins as secretary to the Committee.

It was brought to our attention at this meeting that some 500 small mine operaors were not covered with compensation insurance which they had waived. Some of these mines were now insolvent, leaving employees without source of recompense for possible injuries. The Commission reported that they had a man in the field to prevail upon these small miner operators to take out such insurance and that considerable success was being met. If not completely successful, legislative means would be recommended to remedy the situation in full.

In June, the committee voted to review cases of recurring hernia, the reviews beginning with that session and continuing in the July meeting. It was pointed out at this time that a scarcity of x-ray films was becoming apparent and that something would be done to notify the physicians over the state on the matter should the situation become acute.

At the September meeting we were advised of something like 38 cases of x-ray burns due to fluoroscope in the instance of the California Shipbuilding Corp — damages amounting to more than $300,000 as settled at that time. This was of side-interest, of course, as the situation had nothing to do with Arizona except as it bordered on the extent of such compensation.

At the October meeting the Committee considered diagnosis of intervertebral disk, recommending that where diagnosis could not be defi-

nitely established by diagnosis and history that myleography should be done.

In December we had some cases of Von Volkman's contracture under discussion as the main item of business. The matter of light work for those on temporary partial disability was discussed as it had been at previous meetings. It is felt by the committee that light employment is very desirable for the morale of these temporary partial disabilities, but the problem is to educate the employers to see the necessity for such employment as the usual employer wants full time labor or none—with the increasing scarcity of labor, this light employment is more apparent now than in the past, perhaps.

A short noon session was held on February 7 to consider a Resolution as recommended by the Commission for rating unscheduled permanent disabilities. The committee adopted the Resolution which is filed with the regular minutes. Test cases under this provision may arise to determine its full status.

The March 5 meeting was the last, prior to this session of April 3, which is convening to hear this annual report as its item of business. At the March session the question of proper fee for physiotherapy arose, the committee feeling that $2 was a fair fee for the average treatment and that the Commission could make adjustment in exceptional cases. Some fracture cases were reviewed by discussion. Dr. Carlson, as chairman, reviewed the work of this committee as compared to earlier industrial relations committees on which he had also served. His comparison was gratifying, showing that understandings between the profession and the Commission have become better and better as time advances until now a most harmonious relationship exists between these two bodies.

As secretary to the committee I wish to concur in these expressions of harmonious procedures and in behalf of the Association wish to thank the committee and the Commission for their diligent attention to the duties and the order of the day as such arose. It has all been very pleasant, very devoted to duty, and, I am sure, very helpful to the profession, the patient, and the commission.

Signed

FRANK J. MILLOY, M. D.
Secretary to Committee

REPORT ON PROCUREMENT AND ASSIGNMENT OF PHYSICIANS

I herewith submit a brief analysis relative to the activities of the Procurement and Assignment Service for Physicians for the State of Arizona.

1. I cannot give you any further information regarding our future activities than that which occurs from time to time in the A.M.A. Journal. However, I can definitely state that every physically qualified physician, coming within the age limit, is most urgently needed by the Armed Forces.

2. Below I submit a list of physicians in private practice in Arizona. I have just completed checking and rechecking this list and I believe it to be correct. This list *does not* include any physician serving in any governmental agency; it *does include* four (4) physicians in service with industrial plants (aircraft). () designates number of physicians in each country who are classified as A-1, therefore, we still have a total of 26 physicians coming within this category.

Maricopa	168	(14)	Gila	17	(1)
Greenlee	4	(0)	Yavapai	14	(0)
Pinal	16	(1)	Mohave	5	(1)
Apache	6	(1)	Navajo	6	(0)
Cochise	21	(1)	Coconino	11	(1)
Santa Cruz	6	(0)	Graham	4	(1)
Yuma	9	(1)	Pima	93	(4)

3. We have approximately 175 physicians (non-members as well as members of the Association) now serving in the Armed Forces. We are credited with many more, however, I have carefully checked the list submitted to me from Washington, and the above number I believe to be correct.

4. Insofar as I know we do not have a quota for the year; regardless, it is our duty to furnish just as many physicians as possible—after giving due consideration to our civilian and industrial population. We, as physicians, have done and will continue to do our best. We, I think, should for the duration abandon the idea of our usual two-four weeks annual vacation; remain on the job, and render our most efficient service in caring for the civilian and industrial population. Our boys in the South Pacific and Europe are not getting a *vacation*, so it is up to us to give our ALL and stay on the job.

Arizona physicians have certainly proven their patriotism; we stand among the "top-leaders" and I am sure we shall continue in this position.

I am indeed most grateful for the splendid cooperation extended me by the members of our state-wide committee, and I most urgently solicit a continuation of the committee's assistance.

Sincerely yours,

CHARLES S. SMITH, M. D.
Chairman, State of Arizona,
Procurement and Assignment
Service for Physicians.

CHAIRMAN OF THE COUNCIL

There have been two called meetings of the Council since the last annual session. The primary purpose of these meetings were first to provide tentatively for an association journal until the House of Delegates could convene in annual session and make full provision for the same, and second to hear the report of the chairman of the committee on public policy and legislation relative to the conference of the western states held at Salt Lake, the purpose of these conferences being to establish an organization which would maintain an information bureau at Washington. These two conferences have been reported in full by the chairman of that committee in the last two issues of Arizona Medicine, therefore, I will not repeat. At each of the two meetings the program for the annual session was discussed and approved.

For the consideration of the House of Delegates at this 1944 meeting will be the following main items as considered by the Council at its sessions of September 12 and February 6.

1. Amending the By-laws to make full provision for an Association Journal.

2. Take action on the matter of joining with the western states in maintaining an information bureau at Washington.

To discuss hospital and health insurance to see whether Arizona is yet ready for further expansion of these plans.

4. The first recommendation of the Treasurer was not approved. After considerable discussion it was voted to continue the dues at $30.00. The second recommendation was approved by the Council.

The Council selects its own chairman when it holds its first meeting for the year. It has been a pleasure to have served in this capacity. Our Council meetings have virtually 100% attendance, the only absences being when our members happen to be out of the state. Your Council members from Prescott, Bisbee, Tucson, Morenci, Safford, Ray—all points east, west, north or south—have been most diligent with their attendance at all sessions. No expenses are paid for these trips, so we feel a just pride in this attention to the interests of the membership. As Chairman my attendance record is 100% along with the majority of our 14 Conncil members.

The president, secretary, and treasurer will have reports of their specific activities and duties, hence I need not cover them in this report for the Council as a whole. I will conclude by saying that your Council has been on the job throughout the year and that your officers and committees have kept you informed through the Bulletin and Arizona Medicine.

Respectfully submitted
E. PAYNE PALMER,
Chairman of Council, 1943-1944.

CANCER COMMITTEE

During the past year the Cancer Committee of the Arizona State Medical Association has not been so active as in prveious years in the Educational Campaign control against cancer. This is due to war activities which necessarily are in the foreground. The Cancer Committee has been fairly active with the American Society for the Control of Cancer and the Women's Field Army have cooperated in carrying on the Educational Campaign. These organizations work in unison for a common cause, and we believe that they are obtaining very saitsfactory results.

April has again been designated as Cancer Control month by Congress, and each year by proclamation the President designates April as Cancer month and asks that every effort be given in the Cancer Control Campaign. During this month the Educational Campaign is intensified. Talks are given before noon-day clubs, service clubs, and women's organizations. At these meetings moving pictures are shown and literature is distributed. Many radio broadcasts have been given throughout the State, and State newspapers have aided materially in pub-

lishing articles relating to cancer. The newspapers and radios are giving splendid support.

Cancer is steadily gaining in Arizona and we are badly in need of Cancer Clinics. The Cancer Committee feels that the Association and Women's Auxiliary could aid materially in obtaining our objective if they would only realize the seriousness of the cancer situation in Arizona.

E. PAYNE PALMER,
Chairman.

MARICOPA COUNTY MEDICAL SOCIETY

March 6, 1944

SCIENTIFIC PROGRAM

1. Tsutsugamuchi Fever (Scrub Typhus):
 As discussed by Preston T. Brown, M. D.
 Presented by W. Warner Watkins, M. D.
2. Parasites and Their Relation to Public Health.
 Presented by H. L. McMartin, M. D.

Monday, April 3, 1944

1. Panorama of Unusual and Interesting Cases —Illustrated.
 By: Capt. Wm. W. Heck, M. D., Williams Field; Fred G. Holmes, M. D., Hilton J. McKeown, M. D., James M. Ovens, M. D., John W. Pennington, M. D., W. Warner Watkins, M. D., Henry G. Williams Field.
2. Penicillin.
 By: Capt. Robert Burns, M. D., Luke Field.
3. Follow Up on Coccidioides Survey at Williams Field.
 By: Capt. Wm. C. Egloff, M. D., Williams Field.

PIMA COUNTY MEDICAL SOCIETY

(Tucson)

March 14, 1944

Practical Yardstick of Adequate Nutrition
Dr. Marguerite Williams

May 6, 1944

1. "Endobronchial Tuberculosis and Artificial Pneumothorax."
 Dr. David Bernstein
2. "A Brief Resume of Heart Disease in the Veterans' Administration Facility, Tucson, Arizona."
 Dr. Philip Siegel

Staff Meetings

ST. JOSEPH'S HOSPITAL STAFF

(Phoenix)

MARCH 9, 1944

I. Case of Cystic Fibrosis of the Pancreas. with Pulmonary.
 Dr. Howell Randolph.
II. Ulcer of the Sigmoid with Diverticulae.
 Dr. Louis Dysart.

APRIL 10, 1944

I. Diphtheria.
 Dr. R. T. Phillips.
II. Idiopathic Purpura Hemorrhagica, Fulminans.
 Dr. A. E. Cruthirds.

TREASURER'S REPORT FOR THE YEAR ENDING MARCH 30, 1944
(Books closed that date.)

TOTAL RECEIPTS ALL SOURCES, INCLUDING MEDICAL DEFENSE.

Balance in General Fund April 5, 1943 (less checks outstanding)	$ 7,068.01
Dues 260 members @ $30.00 (Medical Defense $5.00)	$ 7,800.00
32 members @ $30.00 (Medical Defense $2.00)	7,800.00
1 - 1941 dues - not previously paid	15.00
6 associate members @ $15.00	90.00
1 associate to bring up to regular membership (Med. Defense $2.00)	15.00
1 check to replace check returned	15.00
Sale of Insurance forms, including stamps	75.86
Sale of Dictaphone	400.00
Coupons from Bonds (Medical Dkefense $147.42)	159.99
Coupons from Bonds (Medical Defense $671.99)	721.73
Interest on Defense Fund, January - December, 1943	30.23
Balance in Defense Fund (Savings Bank)	1,546.21
United States Bonds—$31,000 Medical Defense, ($5,000 General Fund)	36,000.00
Total	$54,897.00

TOTAL DISBURSEMENTS ALL SOURCES

From General Fund	$ 8,967.39
From Defense Fund	3,000.42
Total	$11.967.81

C. E. YOUNT, M. D., Treas.

GOOD SAMARITAN HOSPITAL

(Phoenix)

OFFICERS

Dr. L. B. Baldwin, Chief of Staff
Dr. Wm. Woern, Vice-Chairman
Dr. B. P. Frissell, Secretary

COMMITTEE CHAIRMEN

Anesthesia, Robert H. Stevens
Pathology and Autopsy, Dr. Maurice Rosenthal
Pediatrics, Dr. E. H. Running
Medicine, Dr. J. D. Hamer
Records, Dr. Howell Randolph
Surgery, Dr. H. G. Williams
Orthopedics and Physiotherapy, Dr. James Lytton-Smith
Eye, Ear, Nose and Throat, Dr. Wm. Woern
Genito-Urinary, Dr. J. W. Pennington
Interne Training, Dr. Fred G. Holmes
Obstetrics and Gynecology, Dr. F. C. Jordan
X-ray, Dr. W. W. Watkins

ACTIVE STAFF MEMBERS

Louis B Baldwin	R E. L. Foster	J H. Patterson
G. R. Barfoot	J. D. Hamer	J. W. Pennington
L. D. Beck	Fred G. Holmes	Kenneth Peterson
Paul Case	F. C. Jordan	E. E. Pohle
Matthew Cohen	Louis Jekel	Howell Randolph
M. L. Day	James Lytton-Smith	Victor Randolph
Angus De Pinto	M Matanovich	E. H. Running
J. E. Drane,	A. J. McIntyre	Paul Ryerson
George Enfield	S. D. Little	A. A. Shelley
A. E. Cruthirds	L. C. McVay	Robert Stevens
H. J. Felch	H. J. McKeown	W. W. Watkins
R. L. Flinn	J. R. Moore	E. C. Wills
B. P. Frissel	J. M. Ovens	H. G. Williams
Wm. G. Furth	E. Payne Palmer	Wm. Woern

FEBRUARY 28, 1944

I. Care of Pantapon Poisoning.
Dr. Louis B. Baldwin.

II. Ruptured Dissecting Aneurysm of Aorta.
Dr. B. P. Frissell

MARCH 27, 1944

I. Case of Azotemia.
Dr. H. J. McKeown.

II. Case of Periarteritis Nodosum.
Dr. E. A. Gatterdam.

Clinical Pathological Conferences

ST. JOSEPH'S HOSPITAL STAFF
MARCH, 1944

The case is that of a white woman, 60 years of age, who entered the hospital complaining of abdominal cramps for four days and diarrhea for four days. After the first day of these symptoms, she took two Carter's Little Liver Pills. The next day, she stated, her stomach felt "full of rocks" and she did not eat. Has stayed in bed most of the time since, taken mineral oil, and eaten practically nothing. She went to her doctor for a "shot", having had a slight fever for a day or two.

Her only serious illnesses in the past have been typhoid and scarlet fevers. Her menstrual history is of no importance. Menopause at 45, no bleeding since. She has not had jaundice or any genito-urinary symptoms.

Examination shows a very obese woman; blood pressure is 150 systolic, 80 diastolic. She does not seem to be acutely ill; she is rational and well oriented. Head—shows normal contour and symmetry. Eyes, react to light and in accommodation. Teeth absent; tonsils large and sclerotic; breasts, no masses. Lungs appear to be normal, no rales. Heart shows a normal rate, rhythm and sounds are quiet. Abdomen shows an obese wall; no appreciable rigidity; tenderness in the right lower quadrant.

The patient was taken to surgery, where a surgical examination was made; an appendectomy was done. Five days later, a fecal fistula developed; patient in shock but by the next day was improving. Two days later, the patient was again in shock; later said she felt better, but no blood pressure was obtainable. After a few hours, she again appeared better, pulse good; but at 10 P. M. she again went into shock, pulse rapid and thready; at 1:30 A. M. patient was comatose without perceptible pulse or blood pressure; very cold, respirations very labored and at 3 A. M. the patient expired.

Temperature recordings: On the 19, (admission) 101°; next day it had reached 103.2; on the 21, 104°, dropping to 100°; next day the highest was 101°; then reached 100°, and was 98° just before death. On admission, pulse was 90, when the temperature was 104, pulse reached 135, later dropping to 100 and thereafter it varied from 75 to 100.

On admission, urinalysis showed a trace of albumin, occasional hyaline casts; Hemoglobin was 81%; red cells, 4,300,000; white cells, 8,750; neutrophiles 62%; lymphocyytes 29%; nonfilaments, 7%. Kahn & Wasserman were negative. Tranfusions were given on October 26, 500 cc. each.

Autopsy was performed.

DR. J. M. OVENS:—We have here a sixty-year-old woman who was operated upon and her appendix removed. Whether or not her appendix was pathological we do not know. We do know, however, that she developed a fecal fistula and this is the only clue we have. In a discussion such as this, I see no intelligent way to make a positive diagnosis except to narrate the probable causes of fecal fistula and on a percentage basis select the most probable cause.

Appendicitis naturally ranks as the number one cause when the patient presented pain and tenderness in the right lower quadrant before surgery. Regional ileitis is usually found in younger people. Chronic granuloma such as tubereulosis, actinomycosis or blastomycosis occur in younger people as a rule. Malignancy in the caecal region can be ruled out fairly well, for who would remove an appendix with malignancy present in the caecal region? Malignancy in the distal bowel overlooked could be an etiological factor especially with the history of cramps and diarrhea and the development of a fistula which would follow the pressure behind an obstruction and blowing out of the appendieeal stump. The patient is a little old to have a pelvic inflammatory disease or a ruptured ovarian cyst. Other inflammatory conditions

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FRANK J MILLOY, SECY ARIZONA STATE MEDICAL ASSN=

113 NORTH CENTRAL AVE PHNX=

FIFTH WAR LOAN DRIVE WILL START JUNE TWELVE TO RUN THROUGH JULY EIGHT. TREASURY DEPARTMENT HAS AGAIN REQUESTED ACTIVE AND INTENSIVE SUPPORT BY PHYSICIANS OF THE UNITED STATES AND HAS ASKED THE AMERICAN MEDICAL ASSOCIATION TO SOLICIT SUCH SUPPORT ON THE PART OF STATE AND TERRITORIAL ASSOCIATIONS AND COUNTY AND DISTRICT SOCIETIES. DEPARTMENT REQUESTS THAT MEMBERS BE ASKED TO PLEDGE IMMEDIATE COOPERATION TO WAR FINANCE COMMITTEES TO EXTEND ALL POSSIBLE AID TO LOCAL COMMITTEES AND TO INVEST PERSONAL AND ORGANIZATIONAL FUNDS IN WAR BONDS. DEPARTMENT ALSO ASKS THAT STATE ORGANIZATIONS ENDEAVOR TO SECURE RECORDS OF SUMS SO INVESTED BY MEMBERS AND THAT THE STATE SECRETARIES SEND SUCH REPORTS TO THIS OFFICE FOR TRANSMISSION TO WASHINGTON. REPORTS FROM INDIVIDUAL PHYSICIANS NEED NOT BE SIGNED. IN ACCORDANCE WITH ESTABLSHED PRECEDENT THIS MATTER IS BEING OFFICIALLY REFERRED TO SECRETARIES OF CONSTITUENT STATE AND TERRITORIAL ASSOCIATIONS FOR OFFICIAL CONSIDERATION AND ACTION.

¶ COPY OF LETTER RECEIVED FROM TREASURY

¶ DEPARTMENT BEING SENT TO SECRETARIES OF ALL CONSTITUENT STATE AND TERRITORIAL ASSOCIATIONS=

OLIN WEST.

within the abdomen such as acute cholecystitis with any of its sequelae or acute pancreatitis are possibilities to be ruled out. Diverticulitis in a person of this age is a frequent offender and presents many difficulties in diagnosis as well as treatment. Major castrophies such as mesenteric thrombosis, volvolus or intussusception would present a much sicker patient, who treated by appendectomy, would not live for six days. Renal pathology usually gives a more characteristic history. Any of these conditions mentioned can cause a fecal fistula.

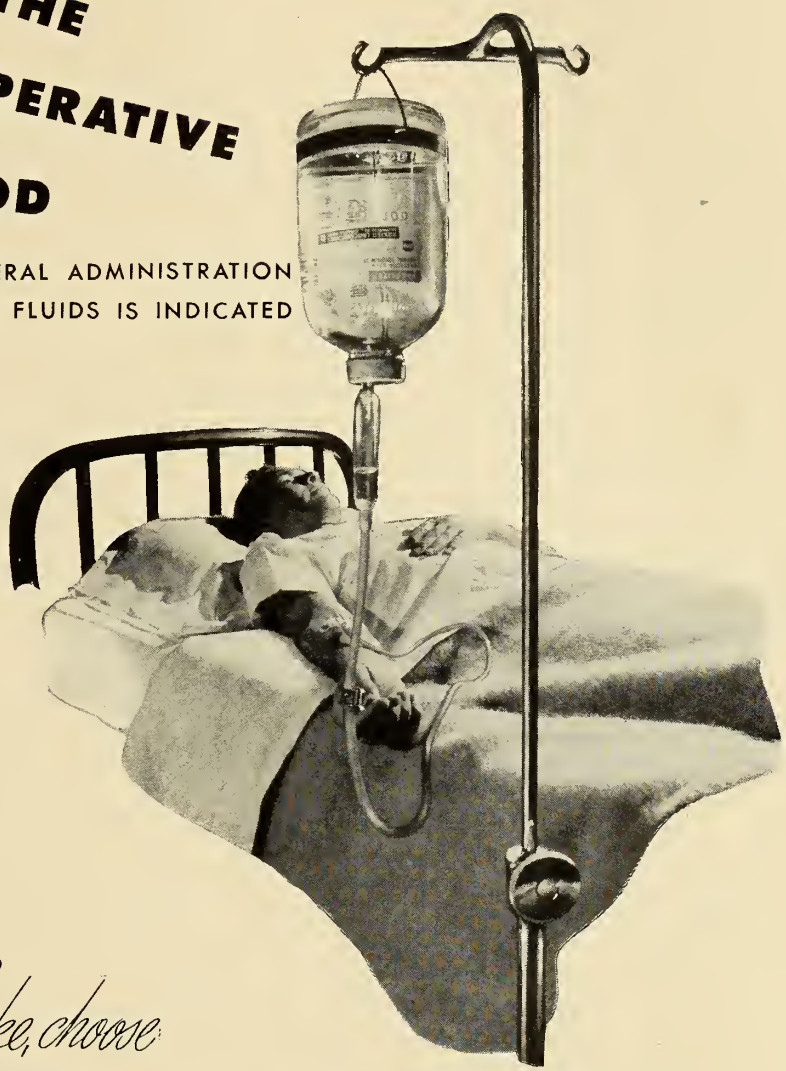
A fecal fistula can have the internal opening anywhere in the small intestine from the beginning of the jejunum to the terminal ileum. The lower down the fistula originates the less debilitating is the course and the better the possibility of spontaneous cure. A fistula may also arise from the large intestine. They increase in frequency the further toward the anus that the internal opening is found. The ileocaecal region is the most common site for fistula formation.

Fecal fistulas originating in ileocaecal region may arise from conditions existing before operation, conditions arising at operation or conditions arising after the operation.

(A) Before operation we have primarily the type of lesion found, that is the causazation. For example: regional ileitis, ruptured diverticulitis, ruptured appendix with abscess forma-

FOR THE POST-OPERATIVE PERIOD

WHEN THE PARENTERAL ADMINISTRATION OF FLUIDS IS INDICATED



for Safety's Sake, choose

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tion (especially when one is unable to remove the appendix), gangrenous segments of bowel due to vulvolus, mesenteric thrombosis or the like can be listed as preoperative causes of fecal fistula.

(B) Causes of fistula formation at operration may be classed as either

(1) Technique of operation. For example: it is shown that fecal fistula arises much more frequently after inversion of the appendix where a purse string suture has been applied. Cultures have been made from needles used to place a purse string suture and in a great majority of the percentage of cultures return positive for bacillus coli showing that the needle penetrates into the bowel and becomes contaminaed. Likewise instruments used to crush the appendix stump before ligation have also become contaminated. So in either purse string or investing the stump or in crushing the stump before ligation, we have causative factors which may aid in the formation of fecal fistulas. The technique of placing the drain and the kind of drains used, we know that the harder the drain the more apt fistula is to follow.

(2) *Surgical Errors:* The leaving of a large piece of catgut may result in the formation of a fistula. A sponge, pin, or needle left in the abdomen may result in fistula formation.

(C) In conditions arising after operation we may have the slipping of the knot on the appendix stump, resulting in fistula formation, abscess, or peritonitis. A drain that is not shortened soon enough or not removed soon enough when left in immediate proximity to a suture line may result in the formation of a fistula. The blowing out of an appendix stump from back pressure, when, for example, the sigmoid would be obstructed and pressure backing up to the caecal region, blowing out this weakened region, can cause fistula formation.

Since we have reviewed the factors concerned and causes of fistula formation, we must point out what we believe is the cause in this case. We have a woman who is sixty years old, vague abdominal complaints for four days, who had a practically normal blood count, who did not appear to be very sick but who had tenderness in the right lower quadrant of the abdomen. These symptoms suggest appendicitis, and bring up the question of appendicitis in the aged. In people past forty, appendicitis is different than in people under forty. Older people do not respond so quickly with different defense mechanisms of the body, they do not appear to be sick, their pulse may remain normal. The pathological process itself pursues a slower course, no leucocytosis may be found, and at operation, abscess formation or gangrenous appendix may be found on the third or fourth day. It may be said the first day the appendix presents a picture of inflammation, the second day it presents a picture of suppuration, the third day gangrene sets in and the fourth day we have either localized abscess or generalized peritonitis ensuing. Just as the defense mechanisms of the body are slow in responding to appendicitis in older people so defense mechanism is slower in responding to complications, and we find that the mortality rate is higher from appendicitis past forty. For example the percentages as given by different authors is twelve percent in the fifth decade, fifteen percent in the sixth decade, seventeen percent in the seventh decade, and forty to forty-five percent in the eighth decade.. So it is not hard to visualize this patient with vague abdominal complains, no leucocytosis, slight temperature, pain in right lower quadrant being operated for appendicitis. The appendix being removed and then following the removal of the appendix whether it was injected, whether it was suppurative, whether it was abscessed, requiring drainage, or whether it was a normal appendix or apparently normal appendix and following its removal had a fistula from one of the causes previously mentioned.

The fistula in developing begins to develop a little pressure in the abscess first formed and then ruptures through the wound as the formation of fecal fistula, perhaps there was a little leaking around the wound which put the patient in a moderate temporary shock. This was relieved by anti-shock therapy. This fistula went ahead and drained for two days and then perhaps another pocket and a ruptnre during which leakage took place. Maybe the fistula tract was broken through and peritonitis began its death-causing march. At this time, the patient, being an older person without the resistance of a younger person, could easily have followed this course and gone into shock from peritonitis. It is not at all hard for me to realize with the chain of symptoms this patient narrates to have the abdomen opened for acute appendicitis, to find a moderate amount of free fluid in the abdomen, turbid or even purulent in character, to have the appendix be the scene of a periappendicitis and not a true appendicitis. Nevertheless, rather than contaminate the entire peritoneum anymore and traumatize the intestines more, to have one remove the appendix, put drains into the pelvis, pericolic gutter and into the region of the appendix and close the abdomen. The real cause of the pathology being perforation of a diverticulum due to acute diverticulitis and this real pathology not having been discovered. The patient continued to drain the peritoneal fluid, fecal in odor due to the number of bacillus coli found, and in six days succumb to a fatal peritonitis. It is not hard to find on opening the abdomen a moderately infected appendix, the appendix removed, and a malignant lesion in the sigmoid overlooked and having the

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NOTE: Appointees for terms expiring in 1944 will be named in the July issue.

appendix stump blow out and form a fistula which followed the courses just mentioned.

And so, in conclusion, we may say that to reconstruct a case and make a diagnosis on a case summary as this is like building a body from a skeleton which contains no vertebrae and no femuri. In neither case will the end product be complete. The body built from the skeleton without femuri and vertebrae will be an incomplete body, likewise, any diagnosis made from an incomplete history as this, is bound to be a diagnosis based purely upon percentages, and so with the aid of the history given and the percentage possibility, my diagnosis is as follows:

Diagnosis No. I: acute appendicitis ensuing the course of events which I have mentioned.

Diagnosis No. II: acute diverticulitis with rupture ensuing the course I just previously narrated.

Diagnosis No. III: Carcinoma or constricting lesion of the lower portion of the bowel causing the course that I have also narrated, the last mentioned being very improbable.

The following diseases were mentioned in the differential diagnosis during the general discussion:

1. Mesenteric Portal Thrombosis
2. Intestinal Obstruction
3. Amebic Dysentery
4. Regional Ileitis
5. Carcinoma of Caecum
6. General Peritonitis
7. Typhoid Fever
8. Infectious Granuloma
9. Acute Diverticulitis
10. Coronary Occlusion.

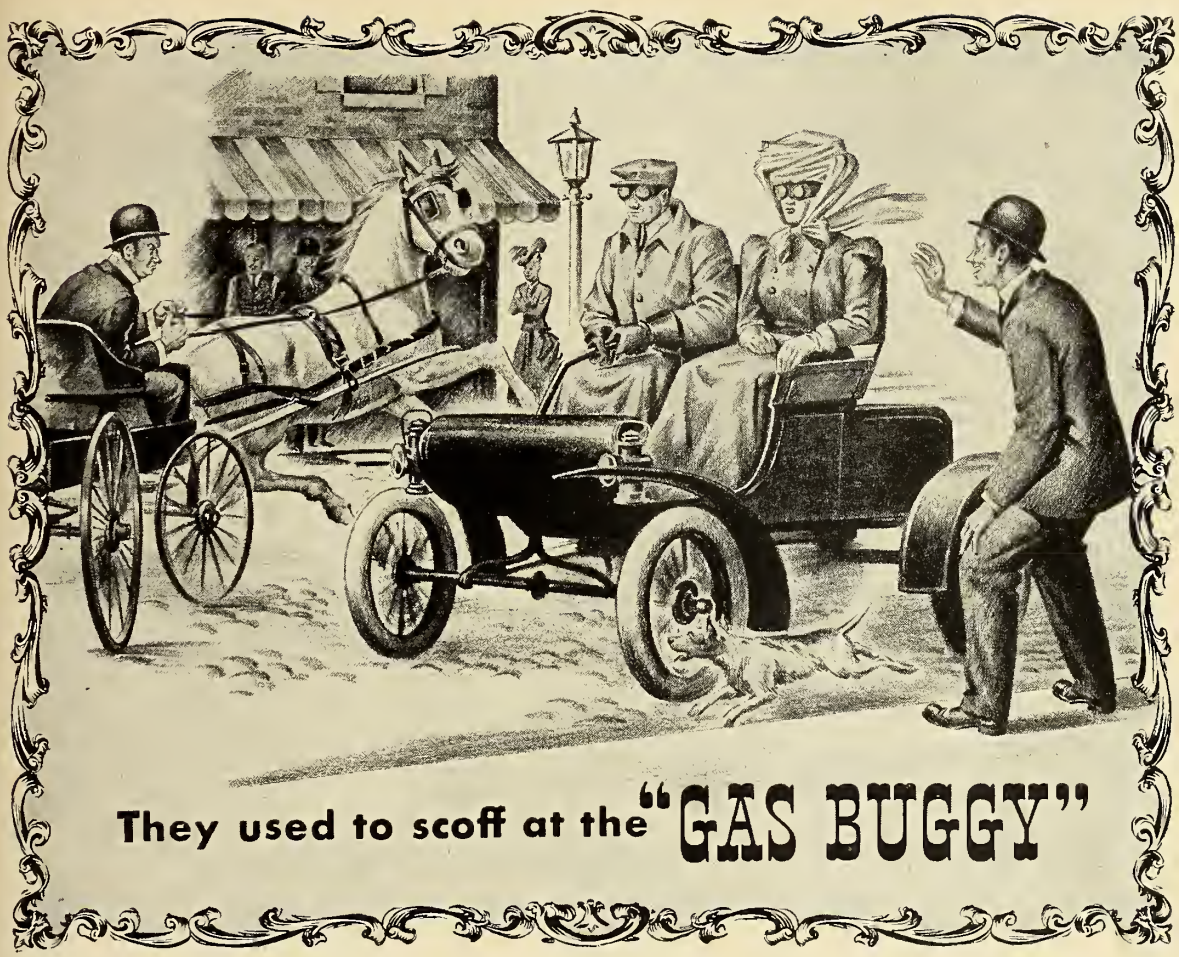
DR. T. MORAN—*Pathological Report*

Appendix:—Sections show a diffuse lymphocytic infiltration of the serosal layer, with some neutrophiles. The musculature is thin and fibrous. There is some hyperemia; the lymphoid tissue is thin. Fatty tissue degeneration is present; no evidence of malignancy is present.

Diagnosis—subacute appendicitis.

Autopsy findings—gross.

Gastro-intestinal tract:—There are a few adhesions adjoining the loops of small intestines and these are easily broken. The stomach is not dilated; the mucosa is normal. The small intestines are normal throughout; the cecum is slightly dilated and together with the ascending and transverse portions, are not unusual in appearance. Beginning with the descending colon, the intestines are contracted, the lumen is small and there is some fibrosis. No areas of dilatation seen. At the beginning of the sigmoid, the mesocolon is indurated and on opening the intestines, a smooth punctured type of ulcer found. The wall is thin but there does not appear to be any gangrene surrounding the



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ulceration. No evidence of diverticulum is seen. This ulcer does not have the appearance of the chronic reaction seen in tuberculosis or amebic dysentery. A few minute diverticula are present.

Microscopic:—Intestines:—There is a marked inflammatory reaction of the mesocolon characterized by fat necrosis and a purulent exudate. There is necrosis of a part of the musculature and at the edge of the ulcer; desquamation of the mucosa is present.

Anatomical findings:—

(1)—Ulcer of the sigmoid with diverticula.

(2)—Arteriosclerosis with myocardial fibrosis and arteriosclerosis of the kidney.

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REPORT OF ANNUAL MEETING MEDICAL AUXILIARY MEMBERS GIVE 30,844 HOURS IN WAR SERVICE

Wives of Arizona doctors have given approximately 30,844 hours of volunteer war service during the past year, according to a report made yestetrday by Mrs. Jesse D. Hamer, at the final session of the Woman's Auxiliary to the Arizona State Medical Association, held in Hotel Westward Ho.

Mrs. Hamer, who is a director of the national and state auxiliary boards and western regional chairman of the war service committee, announced that the war work of the auxiliary members of the state included: promotion of the sale of bonds and stamps, participation in Red Cross nutrition work, serving as doctor's aids by doing typing and filing; Red Cross home nursing classes, serving as nurses aides, first aid course, assisting with recruitment for the U. S. Cadet Nurses Corps, making first aid and soldiers' kits, working at the canteen, serving as hostesses at army camps, assisting with the work of the blood bank, and sponsoring



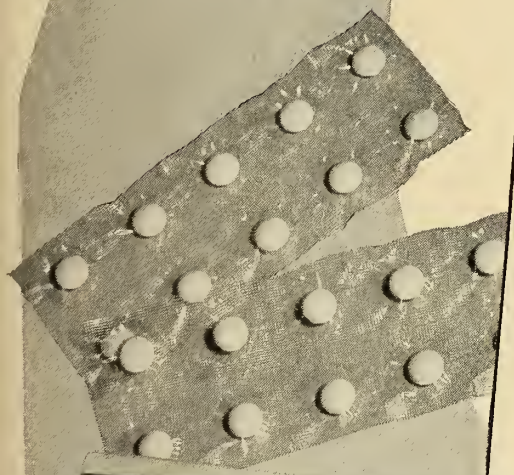
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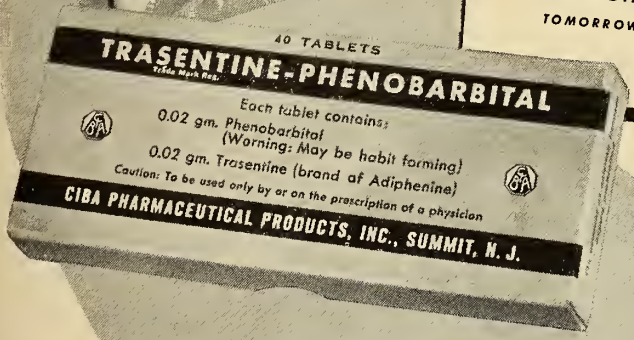
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personal hygiene classes for grade school groups, teen-agers, and adults, and sponsoring a woolen drive in co-operation with the national war conservation program.

She also reported that several doctors' wives, who had been members of the nurrsing profession before their marriage, had, due to a shortage of nurses in the country, resumed their work.

Under the auspices of the Women's Auxiliary to th Maricopa County Medical Association, a woolen drive was conducted and a year's supply of wo lens needed for the Kenny pack treatment of infantile paralysis turned over to Terrence A. Carson, chairman of the state board of the National Foundation for the Treatment of Infantile Paralysis, to be distributed to the various hospitals in the valley.

During the business meeting the state organization at its convention in Chicago in June as a suggested national project.

Dr. Frederick Moore of the department of bacteriology, University of Southern California at Los Angeles, spoke on the subject of anti-bacterial agents. He gave a brief history, variety and use of the sulfonamides and catonic detergents was presented. He summarized the manner of action of bacteriostatic substances, with comments on new anti-bacterial agents which may be developed in the future.

New committee chairmen are Mrs. L. D. Beck, Phoenix, cancer project; Mrs. C. E. Patterson, Tucson, legislative; Mrs. George L. Dixon, Tucson, public relations; Mrs. L. Clark McVay, Phoenix, bulletin; Mrs Joy Omer, Tucson Hygeia; Mrs. George B. Irvine, Phoenix, historian; Mrs. Hamer, Phoenix, war service; Mrs. T. A. Hartgraves, Phoenix, publicity; and Mrs. Henry A. Hough, Prescott, corresponding secretary.

Formal installation of the new officers, Mrs. James H. Allen, Prescott, president; Mrs. Paul H. Case, Phoeniv, president-elect; Mrs. W. Claude Davis, Tucson, first vice-president; Mrs. James R. Moore, Phoenix, second vice-president; Mrs. C. E. Bensema, Tucson, recording secretary; Mrs. E. Henry Running, Phoenix, treasurer; and Mrs. B. B. Edwards, Tucson, Mrs. Harlan P. Mills, Phoenix, and Mrs. Edward M. Hayden, Tucson, directors, was held during the morning session.

A memorial service was conducted by Mrs. James A. Moore for the late Mrs. F. W. Parrish of Bowie, who was a member-at-large.

A luncheon at Encanto Park clubhouse concluded the two-day meeting. Mrs. Matthew Cohen, chairman, was assisted in making the luncheon arrangements by Mesdames Maitland S. Dirks, L. D. Beck, and James L. Johnson.

Signed,
MRS. T. A. HARTGRAVES,
Chairman, Publicity

Book Reviews

BOOK REVIEWS

"BABY DOCTOR," by Isaac A. Abt., M. D., Professor of Periatrics, Northwestern University Medical School, Chicago. Whittlesey House. McGraw-Hill Book Company, Inc., New York. Price $2.50.

"Baby Doctor" is Doctor Isaac Abt's autobiography. Doctor Abt takes you through his life, pausing here, retracing there, never being repititions and always holding your interest. It is a book to start when you have the time to read straight through.



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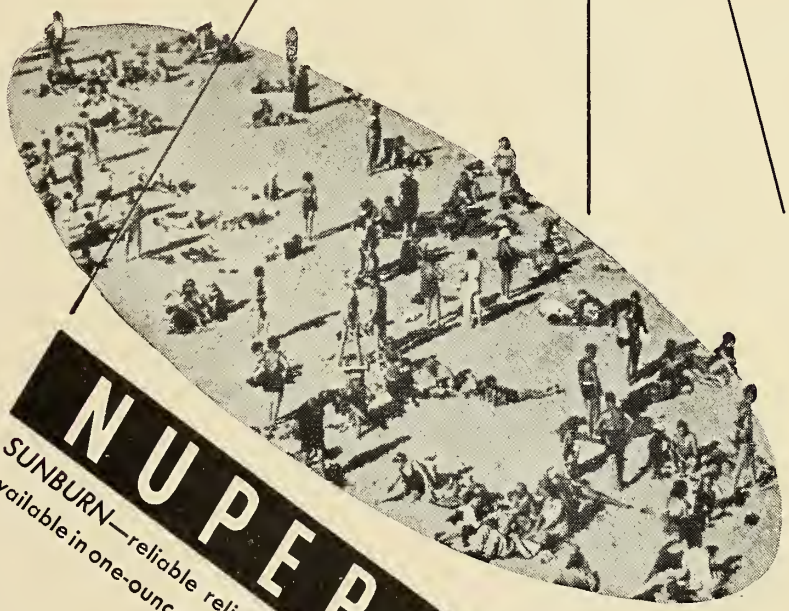
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Doctor Abt was born on December 18, 1867, near Kankakee, Illinois, when malaria stalked the lowlands, and epidemics of scarlet fever and diphtheria swept the state like prairie fire. When he was eight years old, the family moved to Chicago. Young Arthur grew up there, worked in a Pharmacy and decided to become a physician.

His premedical work was done at the young Johns Hopkins University. He then returned to the Chicago Medical College, now Northwestern University's medical school, for the three year course in medicine. This was followed by an internship at Michael Reese Hospital, and that by eighteen months post graduate work in the pediatric clinics of Vienna, Berlin, and London; a medical education far above the average of its day.

Doctor Abt began the practice of Pediatrics in Chicago in 1894. Jobs with the Board of Health helped him over the first lean years. He instructed at the medical schools and eventually, after some disappointment and a term at Rush, became professor of Pediatrics at Northwestern University Medical School.

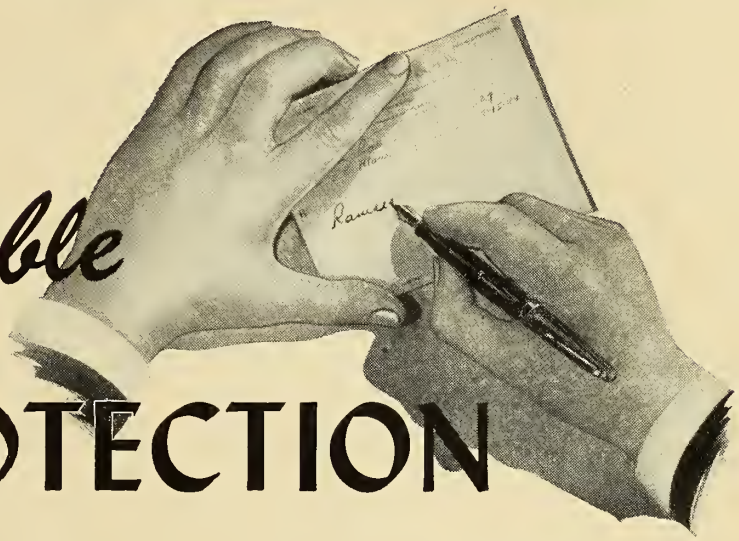
Like most young physicians starting off, Doctor Abt delivered a few babies, sewed up cut heads, and even amputated a bulldog's tail. He saw the treatment of diphtheria progress through the tracheotomy to the intubation to the antitoxin and immunization phases. He grew up with the "Infant Welfare Society" in Chicago. He was one of the crusaders who helped bring modern milk laws to Chicago. When the Morris family wished to build a memorial to their mother, Doctor Abt was consulted and the Sarah Morris Hospital came into being.

Doctor Abt tells of the various diseases; how they were treated when he started to practice, how progress was made, and how finally good results were obtained. He says little of his important contributions to the progress made.

He goes to some length to discuss the difficulty in obtaining good hospital care for children. The financial side of the ledger used to be more important than the infant mortality rate. He labored long and successfully to correct this.

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He was in the thick of the influenza epidemic of 1918 and saw many of his little patients die.

In 1922, Doctor Abt completed his System of Pediatrics, a monumental work, but which Doctor Abt notes was quickly outgrown by the rapid progress in his specialty.

Holidays for Doctor Abt were not many and very liable to be interrupted by calamity, real or fancied, in the neighborhood or across the continent. A man who always went when called never was really free. A vacation in Europe was spent in the clinics of Von Pirquet, Finkelstein, and men of like caliber. Doctor Abt was in Berlin when the first World War broke out. He saw medical research stop and the army take the doctors and nurses from the famous childrens' clinics.

A constant safe supply of breast milk was always one of Doctor Abt's concerns. Because of this, he collaborated with a manufacturer of dairy equipment, and the Abt Electrical Breast Pump resulted.

Due to Doctor Abt's mechanical bent, we no longer see children die because they have inhaled zinc stearate. His interest in this form of pneumonia led to the manufacturers' adopting the self-closing cap he devised for such containers.

In 1927, the French government made Isaac Abt a Chevalier of the Legion or Honor, for obvious reasons. It is still a mystery to Doctor Abt.

Doctor Abt tells of how the Nazi regime persecuted and drove to suicide and exile many of Germany's illustrious medical men.

Doctor Abt gives a little of his private life; summers at th efamily place in Michigan, his sons coming into practice with him, and the loss of his wife.

Doctor Abt closes warning us of the malnutrition and diseases that will result from the present world conflict. "To pediatrics falls the lot of keeping children well and helping them to grow up sufficiently sound in mind and body to govern wisely the free world which their fathers are fighting to save for them."

Reviewed by Robert T. Phillips, M. D.

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UNITED CHINA RELIEF

NEW YORK, N. Y.—Research in the reinjection of red blood cells into the veins of blood donors, which was instituted primarily to aid the work in China of the Chinese Blood Bank, has been responsible for a clinical development that is expected to revolutionize all blood bank programs. Dr. Co Tui, 1st Vice President of the American Bureau for Medical Aid to China, which set up the Chinese Blood Bank, originated this research, which has been carried on with two collaborators.

The research demonstrated in a series of preliminary experiments that by reinjecting red blood from donated blood into the veins of donors, the intervals between donations of red blood for plasma may be drastically cut. At the present time, due to the loss of vitamin content from the blood following a blood donation, the donor is unable to make an additional blood donation until after eight weeks.

In the making of blood plasma, the red corpuscles—which contain the vitamins—are separated from the whole blood, and are not used. By the research carried out by Dr. Co Tui, the wasted content of the blood is thus put back into the body.

Immediate application of this research will be made in China by the Chinese Blood Bank, now en route to that countrry, where the wide-spread malnutrition of potential donors was looked on as one of the gravest obstacles the Blood Bank had to overcome. It is believed that the Chinese Blood Bank will be pioneers in the reinjection of red blood cells into the veins of donors.

The experiments were conducted at the New York University College of Medicine and at the United States Public Health Service laboratories at Sheepshead Bay. Three or four donations of blood were taken from one group of three donors on alternate days. Another group gave blood every week for nine to twelve weeks.

After each donation, the donors' red blood cells were suspended in a solution of dextrose and reinjected into their veins. None suffered serious effects from the heavy drain of blood, although eight weeks is now considered the safe interval between donations when the red blood cells are not reinjected.

The report on the tests pointed out that 832,000 donors, each giving blood every eight weeks, are now required to meet the annual goal of 5,000,000 plasma units needed for the armed forces. If the interval between donations could be cut only to four weeks by reinjecting the red blood cells. the availability of donors would be increased 100 per cent.

"If it is finally found safe to obtain weekly plasma donations, the availability would be increased 800 per cent," the report added. "If this should be the case, the entire military plasma program could be supported by a population numbering only 120,000."

The experiments were conducted by Dr. Co Tui with Dr. A. M. Wright of New York University, and Dr. F. C. Bartter and Dr. R. B. Holt, both of the Public Health Service.

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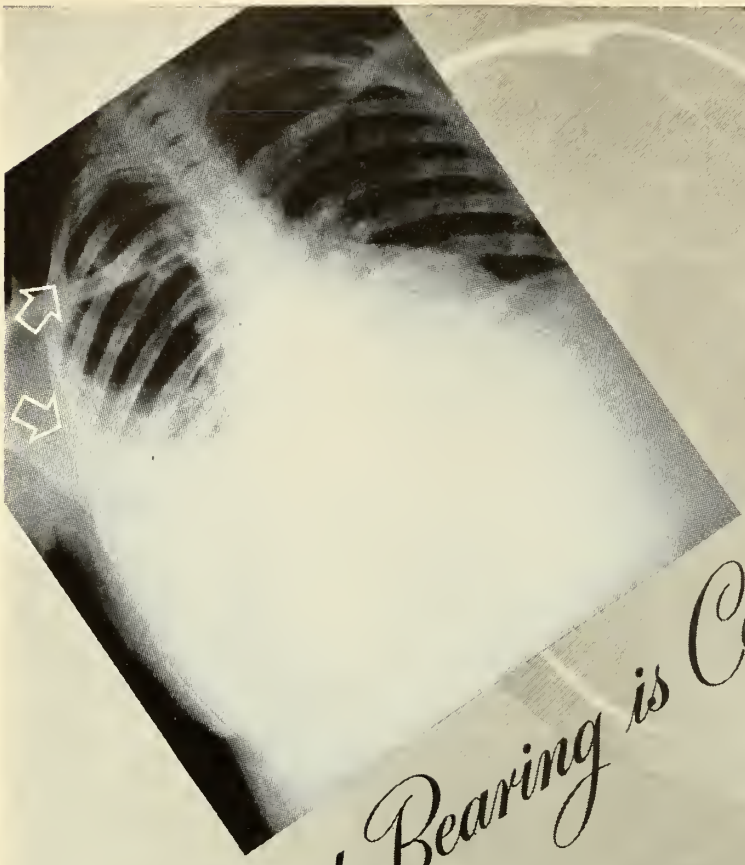
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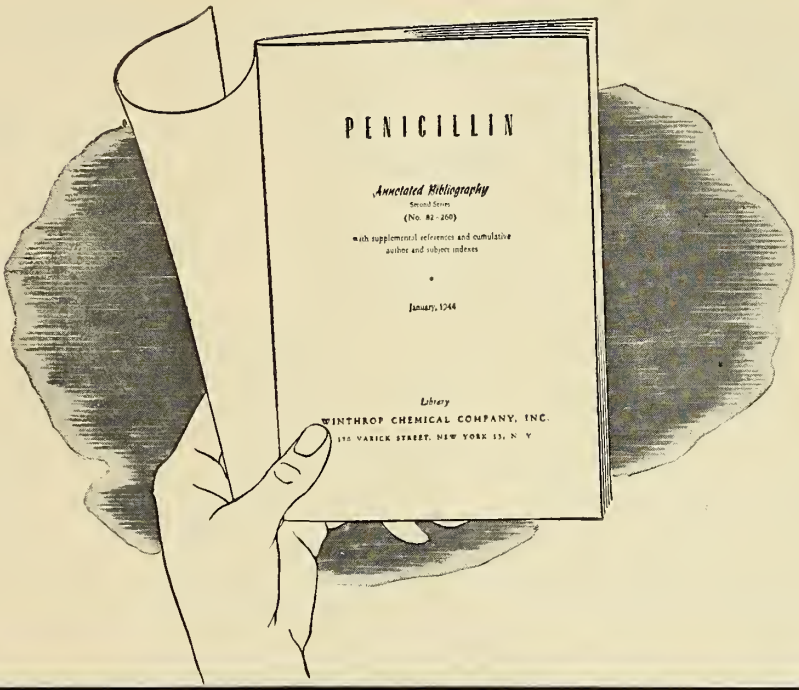


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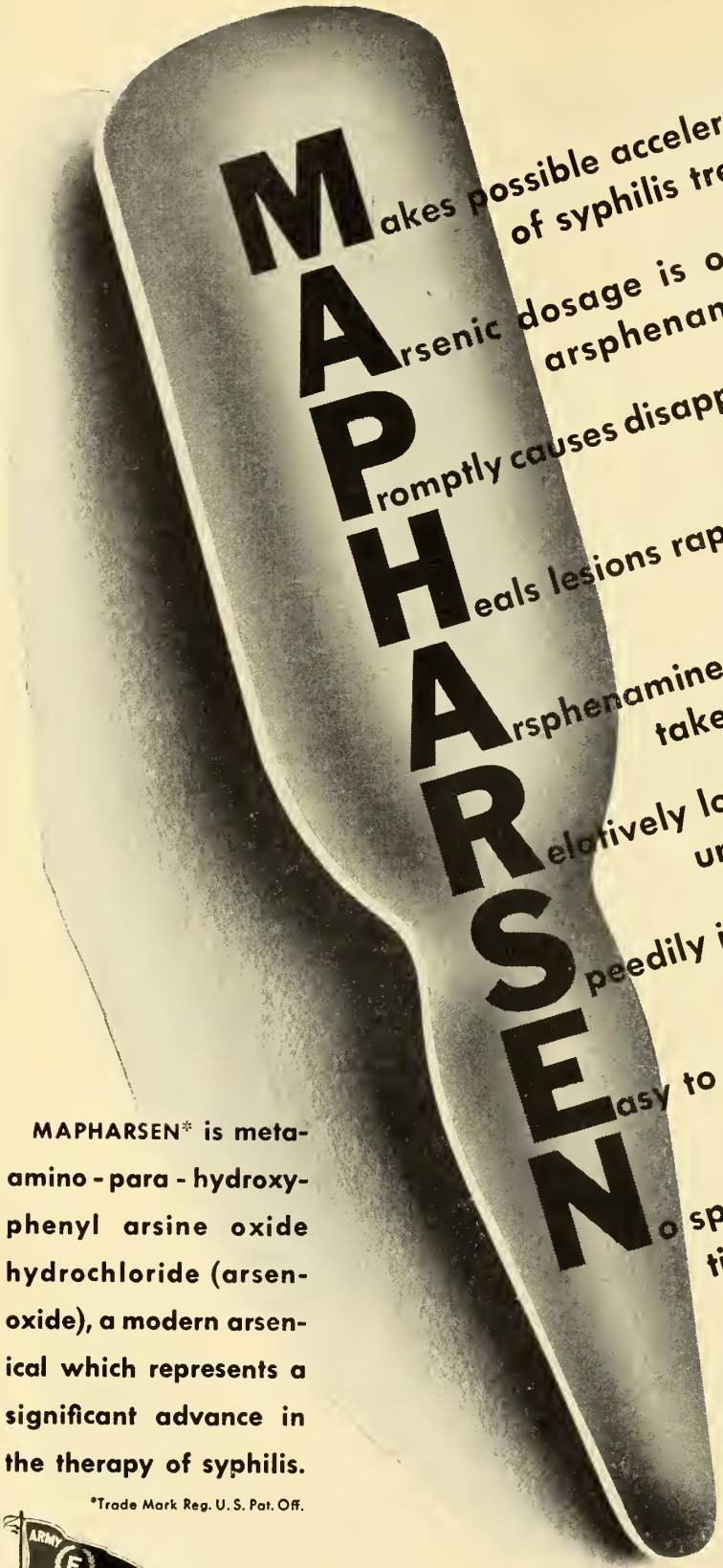
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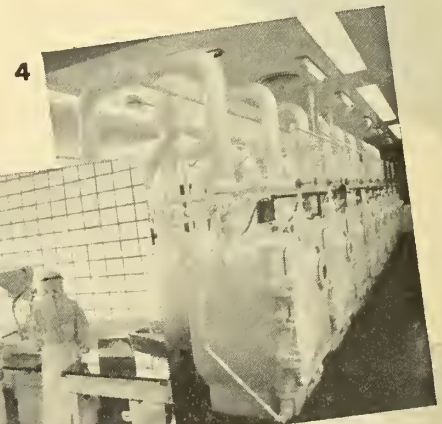


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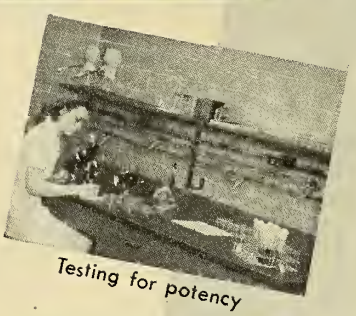
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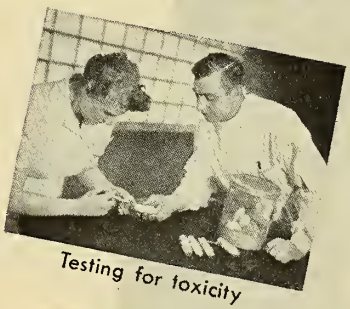
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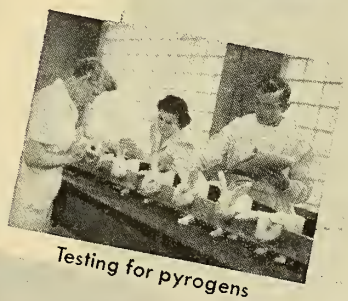
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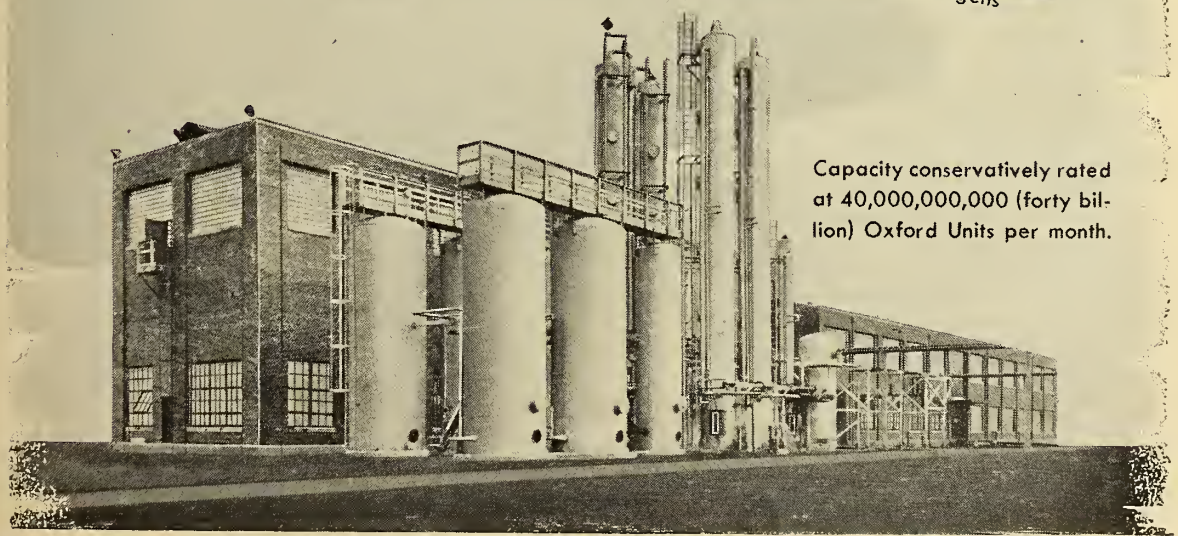
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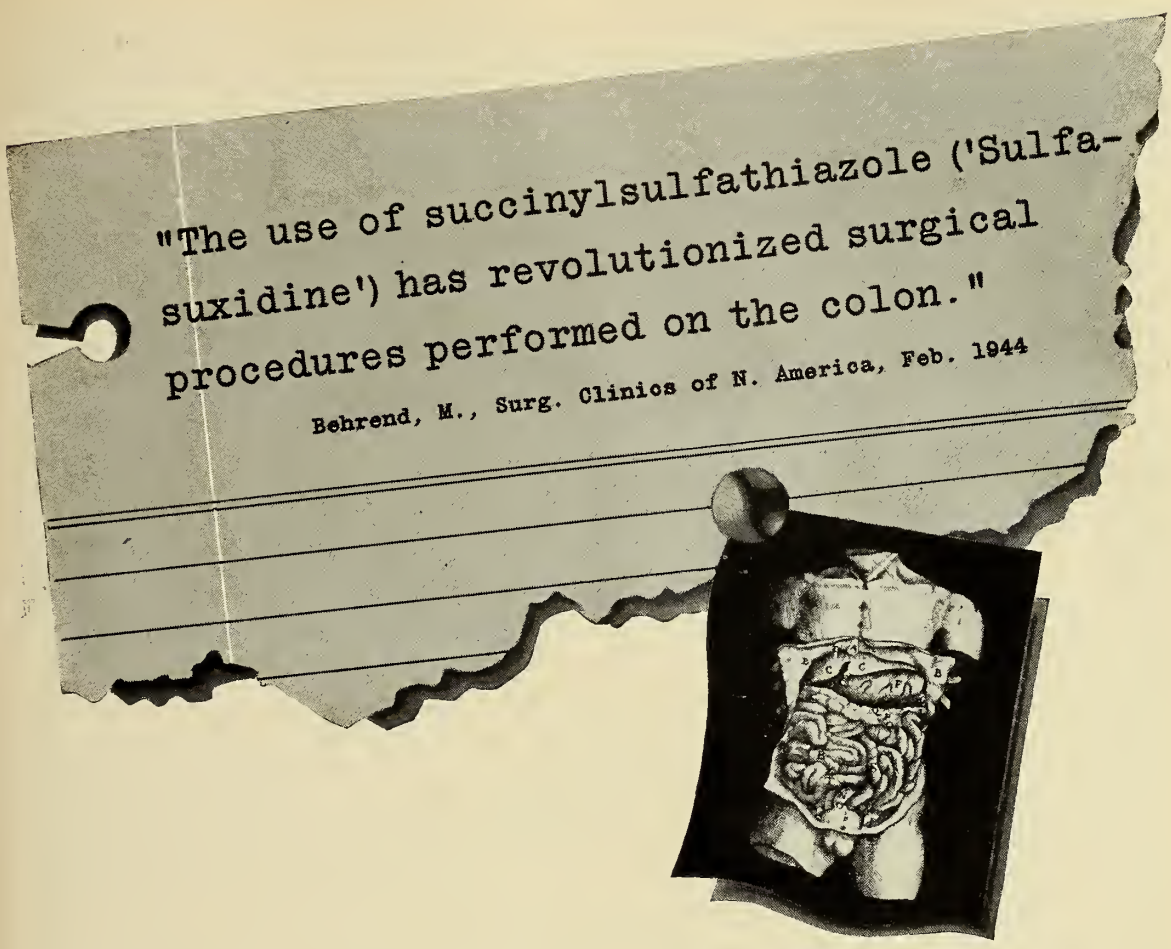
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PEPTIC ULCER

PHILIP J. CUNNANE, M.D., F.A.C.S.
Los Angeles, Calif.

THE problem of treatment in peptic ulcer has finally reached a background of unanimity of approach. After decades of disagreement, the Internist and the Surgeon seem now to be in almost complete accord. As that accord has become increasingly evident, the indications for the surgical treatment of peptic ulcer have become even more restricted.

Ulcer of the stomach and duodenum are essentially identical pathologically. The stomach and the first part of the duodenum have the same embryonic origin and blood supply. They are both continuously subjected to acid secretion. They are both prone to recur after response to adequate treatment. Both occur in non-acid producing mucosa in close proximity to acid producing mucous membrane. Acid is the important factor in the producion of each lesion. Because of this similarity of background, ulcer of the stomach and duodenum are considered together as peptic ulcer.

The Medical Military experience of the English Canadians in the present conflict suggests that, next to flat feet, peptic ulcer is the most frequent cause of disability among enlisted men[1]. The comparative incidence in the United States forces has not been determined. It has been found that 90 per cent of the soldiers with peptic ulcer in the Army of the United States had ulcers prior to entering the service[2]. When the symptoms of this group prevent them from carrying on their duties, they are discharged from the service because medical treatment has not been of sufficient benefit and their symptoms are not of a degree that warrant surgery.

The treatment of the uncomplicated peptic ulcer is primarily a medical problem. Well defined complications do develop in a minority of cases that require surgical treatment. The percentages of such complications developing among all peptic ulcers cannot at this time be determined. Our statistics are not adequately encompassing and do not include great numbers of ambulatory patients that are not hospitalized. The majority of patients that are hospitalized for the treatment of peptic ulcer present complications that are generally recognized as potentially surgical. We can state only that approximately 20 per cent of our hospitalized cases are surgical and that more than half of these are treated surgically for perforation.

It has been the effort of the Surgeon over the period of years to establish both an acceptable operative procedure in ulcer and definite indications for the employment of that procedure. These indications may be outlined as follows:

1. Perforation
2. Hemorrhage
3. Obstruction
4. Failure of response to adequate medical treatment
5. Gastrojejunal ulcer and its complications.

Perforation: More than one-third of patients upon our services that have been treated surgically for perforation have presented spontaneous closure of the perforation by implantation of a contiguous structure such as the omentum. This, however, cannot be predetermined and all must be considered as surgical. Perforated duodenal ulcers are practically always limited to the first portion and are usually on the anterior surface. Acute perforations of the stomach occur usually on the anterior wall near the incisura.

In most cases, the symptoms are typical and the diagnosis is obvious. In differential diagnosis, two points may be here considered. Increased serum amylase and diastasuria cannot always be interpreted as indicative of a primary, non surgical acute pancreatitis. The perforated duodenal ulcer may be associated with a degree of duodenitis that results in ampullar inadequacy and a consequent regurgitation into the pancreatic duct. Evidences of the secondary oedematous pancreatitis are reflected in the increased serum amylase and urinary diastase. Secondly, our ability to demonstrate pneumoperitoneum by X-ray in perforated ulcer is increased by 15 per cent with the patient in the left lateral decubitus position.

Read beforre Arizona State Medical Society, Phoenix, April 15, 1944.

The minimal technical effort consists in closure of the perforation and that only should be attempted. The oedematous obstruction at the pylorus will subside under proper postoperative care which includes continuous decompression. In the unusual case, resective surgery may be indicated. We have felt that it was indicated on only two occasions. In each case, the patient perforated in his hospital bed during the period of preoperative preparation for the elective surgical relief of cicatricial pyloric stenosis.

Drainage may be suggested as a basis of controversy. In the hyperacidity of peptic ulcer, the possibility of infection is not formidable. Cultural results in the presence of 30 or more units of free acid in the empty stomach are usually negative. In the massive perforation following a full meal, with extensive and gross peritoneal contamination, drainage may be indicated. The drain should be remotely placed from the line of suture closing the perforation.

Subacute and chronic perforations occur more frequently on the posterior wall of the stomach and duodenum. They are readily occluded or walled off in the lesser omental cavity and become surgical because of a failure to respond to medical treatment.

Hemorrhage may be an indication for surgery and is an alarming complication. Seventy per cent of hematemesis occurs from an intrinsic benign lesion of the stomach or duodenum and approximately 50 per cent from duodenal ulcer alone. Hemorrhage in varying degrees occurs as a complication of peptic ulcer in 20 per cent of all cases.

The chronic minimal type of hemorrhage is evidenced by tarry stools over a long period of time with progressive secondary anemia and its associated symptoms. The more acute, massive type of hemorrhage is manifested by hematemesis and melena, accompanied by syncope, fainting, air hunger, fall in blood pressure, rapid and thready pulse, collapse and the other symptoms of shock. In the slow hemorrhage, adjustment can be made to the diminishing blood volume. The precipitous hemorrhage does not allow for adjustment to the rapid decrease in such blood volume.

Approximately three-fourths of massive hemorrhages occur in patients past 45 years of age and more than 90 per cent of the deaths occur in patients about that age. Age, sclerotic arteries, and the male sex increase both the incidence and the death rate. There is a tremendous increase in the mortality rate following the first hemorrhage in this older age group. Although the more frequent cause of hemorrhage is the duodenal ulcer, the mortality rate is higher in the massive bleeding from gastric ulcer.

Because of the fact that practically the whole mortality rate in hemorrhage from peptic ulcer occurs in the patient over 45 years of age, a hemorrhage after that period of life presents a definite indication for resective surgery following control and adequate preparation. Repeated hemorrhages in the younger individual who has been under proper and persistent medical treatment present the same indication.

The problem of whether or not the currently and grossly bleeding peptic ulcer should be treated surgically has not yet been decided. Our mortality rate in patients so treated does not improve the general mortality rate among similar cases under medical management. Our indications for such interference have been described by Holman: [3, 4]

1. Recurrent or persistent bleeding during or immediately following complete bed rest.
2. Hemorrhage in the hospitalized patient who is under adequate medical treatment.

Mnelengracht[5] has stated that he considered a mortality rate of 1 to 2 per cent on dietary medical management makes the question unreal to him and relieves him of the responsibility of having to decide in an individual case whether operation is advisable or not. Thorstad of Detroit, in a more comprehensive review of the problem of the bleeding peptic ulcer, concludes that there is no proof, as yet, that those who attempt the surgical arrest of acute massive hemorrhage from a peptic ulcer are able to do so with a reasonable mortality.

Obstruction of any degree that persists and prevents the patient from following his usual occupation and results in invalidism is an indication for surgery. The criterion of a degree of obstruction that is surgical is not measurable in percentages of demonstrable retention. A minimal obstruction may incapacitate one patient while a greater degree will not interfere with the ability of another patient to carry on with his normal activities. The factual criterion

of a surgical obstruction is progressive vomiting with loss of weight and finally evidences of alkalosis and gastric tetany.

Obstruction with retention may result from one or all of three factors.

1. Spasm
2. Inflammatory oedema
3. Cicatricial stenosis.

Even though the obsruction at the pylorus is complete medical treatment should first be attempted. Inflammatory oedema and spasm as a background of obstruction usually respond to this type of therapy. Cicatricial narrowing does not respond and the degree of such constriction can be determined fully after the spasm and oedema have been made to subside.

This treatment, in addition to overcoming the alkalosis and malnutrition and determining the actual degree of cicatricial narrowing, also by decompression diminishes the size of the distended stomach. Distention more definitely involves the lower two-thirds of the stomach rather than the upper one-third. Measurement of the lower two-thirds of the undilated stomach for resection is not mathematical. In the presence of this eccentric distention, measurement is even more difficult. In the past, we have concluded, on the basis of subsequent X-ray study and the evaluation of acid levels, that we have removed less of the stomach than had been intended because of this mathematical inaccuracy exaggerated by distention. Contraction of the stomach to a more normal gastric volume also results in less distortion of the anastamotic line if surgery becomes necessary.

Medical treatment consists in keeping the stomach empty by suction on an inlying Levine tube, the adequate administration of glucose and saline solutions parenterally, sedatives and anti-spasmodics, and sufficient vitamin intake.

Perpetuation of disabling symptoms under adequate and long continued medical treatment usually presents a positive indication for surgery. A larger and more controversial group falls under this classification. This controversial group contains those individuals whose ulcers are intractable because of a failure to submit to proper medical treatment. The Internist is confronted with multiple evident or expressed reasons that contribute towards this failure. The background may be occupational with an inability not only to follow a consistent medical regime but also an inability to change the type of occupation for economic reasons. Today, defense workers on swing and graveyard shifts have difficulty in regulating their habits of living and eating in conformity with an adequately regulated ulcer regime. Ignorance and apathy may be factors. Alcoholism is often contributory.

We must consider here the problem of gastric ulcer. We cannot predict malignant degeneration and the diagnostic error in differentiating the benign from the malignant lesion will approximate 10 per cent. Since the final diagnosis is made too frequently upon microscopical examination of the resected specimen, our indications for resective surgery must be expanded. Since conservative treatment of the gastric lesion places such high responsibility upon both the Internist and the Surgeon, it must be assumed that the uncomplicated gastric ulcer is always potentially a surgical problem.

The malignant lesion may respond to treatment by disappearance of subjective symptoms, by disappearance of the deformity on X-Ray and of blood in the stool. The lesion whose history is long standing is usually benign. The larger lesion is more frequently malignant. The malignant lesion occurs usually in the older patient. Achlorhydria is characteristic of gastric carcinoma but acid may be present in malignancy. Although all of these findings are corroborative, they are not positive in an attempt at differentiation.

The practise on our services include these positive indications.

1. The gastric lesion located on the greater curvature or within one inch of the pylorus is not at any time a medical problem.
2. The gastric ulcer, whatever its location, that fails to respond to medical treatment both clinically and by X-Ray within four weeks should be surgically treated.
3. That gastric lesion, whatever its location, in which the evidence of history, acidity, the X-Ray and the gastroscope does not strongly suggest a benign character, becomes immediatetly a surgical problem.

The gastrojejunal ulcer and its complications are positive indications for surgery. The principal complications are hemorrhage and perforation. Perforation may occur into the general peritoneal cavity, posteriorly into the

head of the pancreas or lesser omental cavity, or into the transverse colon resulting in gastrojejuno colic fistula. Gastrojejuno colic fistula is a devastating complication. Because of the vomiting of fecal material and the concomitant diarrhoea, the diagnosis is usually obvious. If the fistulous tract cannot be demonstrated by X-Ray upon ingestion of barium, the regurgitation from the colon into the stomach can invariably be demonstrated by barium enema. Preliminary right colostomy has greatly reduced the hazard in the surgical treatment of this lesion. The procedure terminates regurgitation from the colon into the stomach and frequently the fistulous tract into the colon spontaneously closes.

Surgical Treatment: The effort of the surgeon over the period of years has been to establish definite principles of an acceptable operation for peptic ulcer. The attempt during all of this time has been to eliminate the current ulcer and prevent the recurrent ulcer. Confusion existed because we did not know how the peptic ulcer originated. We knew only that it was associated almost invariably with a concomitant hyperacidity. The correlation of studies on the physiology of gastric secretions and gastric mobility particularly as it is related to ulcer, and their application to the development of the criteria for a successful operation have, altogether, resulted in our present accepted procedure.

For the Clinician, a review of the physiology of gastric secretion by Schiffrin and Ivy[6] seems the most acceptable. We feel that Wangensteen[7] has contributed more than any other surgeon in the application of these studies to the surgical treatment of ulcer. He is probably frequently quoted without credit because of an inability to refer directly to his many constructive contributions.

It is not known now definitely what factors change the resistance of the gastric and duodenal mucous membranes and make them susceptible to acid digestion. The factors involved in the change of the capacity of the gastric secretory mechanism to secrete acid are not yet recognized. It is recognized, however, that acid is the important factor in the genesis of ulcer. Ulcer itself is not the disease but in the terminal effect of the action of a highly acid gastric secretion upon the mucous membrane of the stomach and duodenum. This whole background, the mucous membrane with its lowered resistance and the gastric secretory mechanism with its changed capacity, constitutes the ulcer diathesis.

The satisfactory operation then, as epitomized by Wangensteen, is the one that (1) eliminates the diathesis and relieves the patient subjectively, (2) prevents the recurrence of ulcer, and (3) does not compromise the future of the patient. Clinically, it is becoming more generally and increasingly evident that the only procedure that conforms to these requirements is the removal of the lower two-thirds of the stomach. That procedure removes the most usual area in which ulcer originates. It removes that portion of the gastric mucosa that secretes histamine and possibly other substances that activate the secretory function of the acid glands of the fundus. It also removes a part of these fundic acid glands. Because of these accomplishments, the final acid content of the stomach approaches achlorhydria. This depression of the acid content and the removal of the non acid secreting portion of the stomach which is potentially ulcer bearing eliminates the ulcer diathesis, relieves the patient subjectively, and, insofar as we can evaluate our end results at this time, prevents recurrence of the ulcer. Although not so isolated, that intrinsic substance that prevents pernicious anemia must in some part be secreted in the fundus since no deficiency disorder results. The remnant of stomach soon allows of meals of normal amount and regularity.

Gastro-enterostomy alone is never the procedure of choice although occasionally it may be the procedure of better judgment. This occasion may occur when resection is so complicated by inflammatory involvement of contiguous structures in the obstructed patient who is a poor risk that the anticipated mortality rate is inordinately high. In the case not so complicated, the difference in mortality rate between gastro-enterostomy and resection is negligible.

When it is suggested now that the surgical treatment for peptic ulcer is resection of two-thirds of the stomach, it should not be concluded that this statement is incontrovertible. That is the treatment on the basis of our present knowledge and until adverse statistics are accumulaed. With the advent of accumulated

statistics, it may be decided that this procedure is unsound. In the past, gastro-enterostomy was defeated and practiced for a number of years despite the increasing incidence of gastrojejunal ulcers following its practice. We do know now that the incidence of marginal ulcer approximated 25 per cent and with earlier recognition, the practise should have been terminated as an unsound procedure. With such inexperience in our background, resection for ulcer will receive a more meticulous and an earlier evaluation.

BIBLIOGRAPHY

1. O. H. Wangensteen: Surgical Management of Peptic Ulcer a Chemical Problem. Minnesota Medicine, 26:206. 1943.
2. Waltman Walters: Gastric and Duodenal Ulcer Among Naval Personnel. Surg. Gyn. Obst., 78:335, 1944.
2. Holman, C. W.: Severe Hemorrhage in Gastric and Duodenal Ulcer. Arch. Surg., 40:150, 1940.
4. Holman, C. W.: Treatment of Bleeding Peptic Ulcers. Internat. Clin. 3:164, 1940.
5. Muelengracht, E.: Medical Treatment of Peytic Ulcer and its Complications, Brit. M. J., 2:321, 1939.
6. M. J. Schiffrin, Ph.D. and A. C. Ivy, M.D., Ph.O.: Physiology of Gastric Secretion, particularly as relateh to the Ulcer Problem. Arch. Surgery, 44:389, 1942.
8. John W. Cline, M.D.: Gastric Resection for Peptic Ulcer. Calif. and West. Med. 59:7, 1943.
9. M. Jordan Thorstad, M.D.: Problem of the Bleeding Ulcer. Surgery, 12:964. 1942.
10. Frank H. Lahey, M.D.: Surg Practise of the Lahye Clinic. W. B. Saunders, 1942.

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X-RAY FINDINGS IN SILICOSIS

Supplementary Report of the Subcommittee on Silicosis of the Committee on Industrial Health, Arizona State Medical Association

A LARGE part of the work of the Subcommittee on Silicosis of the Arizona Medical Association was given over to a careful study of the literature of the past ten years on the important subject of industrial dust diseases. Individual members of the subcommittee were asked to review and summarize the observations on designated phases of silicosis especially. The history and etiology were reviewed by Dr. John W. Flinn of Prescott; the diagnosis and differential diagnosis were reviewed by Dr. Fred G. Holmes of Phoenix; the clinical course was reviewed by Dr. Louis Baldwin of Phoenix; the treatment was reviewed by Dr. William M. Schultz of Tucson; compensation legislation was reviewed by Dr. Frank T. Hogeland of Cananea, and so forth. An important assignment which was not committed to writing was the one on pathology and x-ray findings. It is probably fortunate that this was deferred, because we now have an opportunity to consider some important points in the pathological development and in the x-ray interpretation, and to harmonize these with the Arizona Occupational Disease Law, which was passed at the 1943 session of the legislature and is now being made effective.

The Arizona law above referred to sets up a definition of silicosis to which radiologists will need to conform their interpretation of x-ray findings, so that the officials charged with the administration of the law can translate these interpretations into the terms of this definition. Item 35, of Section 36, of the Occupational Disease Law, defines silicosis in these words: "For the purpose of this act 'silicosis' or 'asbestosis' are defined as chronic diseases of the lungs caused by the prolonged inhalation of silicon dioxide dust (SiO_2) or asbestos dust, respecively, characterized by small discrete nodules of fibrous tissue similarly disseminated throughout both lungs, causing a characteristic x-ray pattern, and by variable clinical manifestations."

This definition of "silicosis" was taken from the Utah law, but was unfortunately confused by the introduction of "asbestosis," and the application of the definition to the latter condition, which is not pathologically or roentgenologically correct. Asbestosis does not result in discrete nodular fibrosis and produces a very different x-ray shadow from that of silicosis. The early reaction to asbestos dust, according to Gardner, is diffuse and the x-ray appearance is a generalized diffuse haziness in the lower lung fields; later the appearance becomes finely granular, producing the well-recognized "ground glass appearance." The industrial hazard from asbestosis in Arizona is very slight, at the present time at least, and until this error in the definition can be corrected by the appropriate legislative amendment, the inclusion in it of asbestosis can best be ignored.

The application of this definition, so far as silicosis is concerned, and the classification of silicosis into its progressive stages of development has recently been elaborated by Dr. Leroy Gardner, of Saranac Lake, N. Y., by answers to questions propounded to him in a hearing before the Utah Industrial Commission. Dr.

Gardner outlined the Saranac Lake classification and described the x-ray appearances found in each stage. There are five stages thus described. Two of the stages are prenodular and show only fibrotic striation which is not pathognomonic of silicosis, since it may result from any condition causing peribronchial fibrosis. These two stages he calls P.1 and P.2, the difference between them depending on the degree of fibrotic striation. Since exactly similar changes can, and frequently do, occur in a variety of other conditions, the radiologist cannot make a positive interpretation of silicosis in these stages, and the definition in the Utah law does not recognize these stages as compensable silicosis. Only after nodulation develops can the interpretation of silicosis be made, and these nodular shadows are classified into stage 1 (S.1), stage 2 (S.2) and stage 3 (S.3) silicosis, depending on the number and sizes of the nodular shadows.

Confusion has arisen in Arizona, because some of us have been following the roentgenological classification of Lanza and Childs (see U.S.P.H.S., Bull. No. 85, 1917), this having become well established as authoritative until recent years. The "first stage" silicosis of Lanza and Childs corresponds to the P.1 and P.2 prenodular stage of Gardner, which he states cannot be definitely interpreted as silicosis and which the Arizona Occupational Disease Law definition does not recognize as silicosis, since nodules have not yet appeared. Lanza now undoubtedly agrees with this, because in his book on "Silicosis and Asbestosis" (1938), the chapter on "Roentgen Ray Diagnosis" written by Pendergrass, discusses Lanza's three stages and has the following comment on the first stage of this classification:

"The general manifestations of this first stage are not characteristic of pneumoconiosis alone, but may be simulated by many other conditions, especially passive congestion, acute or chronic respiratory infections, chronic bronchial catarrh and bronchiectasis. Moreover the hilum and trunk shadows are subject to considerable normal variations in appearance in the adult. As a numerical stage, this one implies, theoretically at least, an early period in progression, yet individuals may remain in this stage for years, or indefinitely. As the manifestations of a typical first stage, with prominent hilum and trunk shadows and linear markings, are not characteristic of pneumoconiosis alone, I am inclined to doubt the fairness of giving this stage a definite medicolegal status, or of using it as a basis for compensation."

In the further elaboration of the subject, Pendergrass summarizes the investigations carried on over many years by Pancoast and himself, and presents their classification, based on a correlation of the pathological and x-ray findings. Pendergrass agrees entirely with Gardner, and we may assume that Lanza is also in agreement. Pendergrass describes "Healthy Lungs and Adnexa" and includes under that heading the P.1 and P.2 fibrotic striation of Gardner's classification, because they are not disabling. He (Pendergrass) says, "Silicosis as a clinical disease begins only when the lung proper is affected", and the x-ray evidence of this is the nodulation which is visible in the roentgenogram of the chest.

With the authority of Pancoast and Pendergrass, Gardner and his associates, and Lanza, back of the Arizona Occupational Disease Law definition of silicosis, we should have no hesitancy in framing our x-ray reports to conform to this now generally accepted classification. Under this definition, we can make an interpretation (diagnosis) of silicosis only after nodulation has appeared and can be distinguished as such on the roentgenogram, and when this nodulation is "similarly disseminated throughout both lungs in a characteristic x-ray pattern," and this in a person with a history of prolonged exposure to silica dust. We should either not use Lanza and Childs' old classification at all (since the Arizona law does not recognize it), or if we do use the term "first stage" as referable to the prenodular linear fibrosis and increased hilar shadow, we should qualify and explain that we are using the term "first stage" in this sense.

It will, however, be less confusing for all the radiologists of Arizona to agree that we will follow the Saranac Lake classification of Gardner, since it now has the weight of all accepted authorities back of it and since it is in conformity with the Arizona law and definition of silicosis. Under this classification, visible nodulation marking the advent of silicosis as a clinical disease, is divided into three stages, called by Gardner S.1, S.2 and S.3. Since the degree of nodulation which marks a silicosis as stage 1, 2 or 3 is not sharply defined, there undoubtedly will be individual variation in

interpretation. However, this is not important since the determination of disability from uncomplicated silicosis does not depend on the amount of nodulation but upon other clinical symptoms which the radiologist is not called upon to evaluate. In several conditions the interpretation of the radioligist is extremely important, aside from the classification of recognizable silicosis.

(1) A differential interpretation is frequently required. There are a surprising number of non-silicotic individuals whose roentgenograms show discrete nodular densities, varying in number from a few to many hundreds, and distributed over the lung fields in a manner quite similar to silicosis. Some of these are the discrete multiple calcifications usually regarded as being the result of healed disseminated tuberculosis of infancy or childhood; these usually are discovered in people who have no symptoms, and many have been uncovered by the Selective Service examinations, school and industrial surveys of large groups of apparently healthy people. When such densities are discovered in a miner or other worker in industrial dust, an important problem is presented to the roentgenologist. The nodular densities of some types of fungus infection in the lungs may be quite confusing, and probably more nearly resemble silicosis than does any other non-silicotic condition. There have been reports from observers of miners in England of fungus infection in the lungs producing shadows indistinguishable from those of silicosis. The mouldy hay fungus, whose lesions in the lungs have been studied by the U. S. Public Health Service, is another example of such confusing condition, which roentgenologists must bear in mind. The densities of miliary tuberculosis can be confusing, especially if first discovered after a period of dust exposure long enough to make silicosis possible. The development of new types of irritant fumes and dusts in the expanding industry of the state will undoubtedly bring us new problems in the interpretation of lung shadows, all of which will demand constant vigilance on the part of roentgenologists, as well as expert knowledge in the interpretation of lung densities and the differentiation of them from silicosis.

(2) Where there is manifest tuberculosis in a worker who claims to have silicosis, the question will need to be determined by the roentgenologist whether there is sufficient nodulation to warrant an x-ray interpretation of stage 1 silicosis. The roentgenologist should answer this question on the basis of the definition set forth in our law and determine whether there are "small discrete nodules of fibrous tissue similarly disseminated throughout both lungs, causing a characteristic x-ray pattern." If the x-ray appearances do not conform to this description, the roentgenologist should not make an interpretation of silicosis. The compensability of the condition does not rest on the tuberculosis, but depends on whether there is an associated *recognizable* and *characteristic* silicosis. An occupational history of long exposure to silica dust, increased hilar shadows and linear striation which *could* be the result of silicosis, and the presence of an active tuberculosis, are not sufficient to warrant an interpretation of tuberculo-silicosis under our law. To make such an interpretation there must first be silicotic nodulation which is recognizable as such on the x-ray film. Lacking this, the roentgenologist cannot make the interpretation and the clinician cannot make this diagnosis. So, there will be the temptation in some cases, to stretch the imagination a little in an effort to satisfy our minds that the nodules are present; or, on the other hand, to assign some other explanation to densities which another roentgenologist might call nodulation of silicosis.

(3) Where there is recognizable silicotic nodulation, with a consistent history, and densities of what seems to be an old tuberculosis, a somewhat different and perhaps more difficult question will be presented. If there is manifest tuberculosis, with cavity formation or other characteristics of activity, or where the sputum is positive for tubercle bacilli, no problem is presented. But if there are apical densities of a pleural cap, or fibrotic changes usually interpreted as healed tuberculosis, or even hilum calcification to the degree which now calls for rejection for military service on the basis of a primary healed tuberculosis, and with these evidences of inactive or obsolete tuberculosis there is also a second or third stage, or even an undoubted first stage silicosis, what is to be our interpretation? Since the interpretation of tuberculo-silicosis can be made only when *both* conditions are active and pro-

gressive, and since the primary healed lesion of childhood and other healed lesions of obsolete tuberculosis are not active, their mere presence along with silicosis does not warrant the interpretation of tuberculo-silicosis. It would seem that the *diagnosis* of tuberculo-silicosis cannot be made from the x-ray interpretation alone and demands the consideration of other factors; hence the final conclusion should be left to the clinician, and the roentgenologist should interpret the two types of shadows as separate entities, without trying to link them into a final diagnosis. In other words, the roengenologist makes an x-ray inerpretation of shadows, but does not make a diagnosis.

To illustrate the changes which develop in the lungs from the inhalation of silica, there are being filed with this report copies of eight films, exhibited by Dr. F. T. Hogeland in the Silicosis Exhibit of this Subcommittee at Prescott in 1942. These are all on the same individual, taken at yearly intervals over a period of eight years, except for one interval of two years. They show the appearances in the lungs of a healthy young man, not previously exposed to silica dust except as he would encounter it while working as a cowboy. He started to work in the mine at Cananea in 1934, and just prior to his employment the first film was made. That film and the subsequent ones taken in 1935, 1936 and 1937 would be regarded as showing no more than the P.1 linear striation, which in his man was evidently due to some old chest infection. In the film of 1938 it might be classed as P.2; in the light of *subsequent* developments, some of this added linear striation and accentuated hilar density is undoubtedly due to beginning silicosis, but the interpretation cannot be made from the x-ray film at this time. The film of 1939 shows nodular densities which warrant interpretation of silicosis, stage 1 (S.1). Two years elapse before the next film was taken in 1941, and here we have definite stage 2 silicosis (S.2). The final film shows further increase in shadow, and the densities presented would be regarded by most roentgenologists as late stage 2 or stage 3 silicosis (S.2 or S.3).

These films present the x-ray densities which represent the tissue changes of a developing silicosis, as will be found described by Gardner and others. The densities shown correspond to the description of Gardner before the Utah Industrial Commission.

W. WARNER WATKINS, Chairman,
Subcommittee on Silicosis.

(Note: The above report was unanimously approved by the newly organized Section on Radiology and Pathology, of the Arizona Medical Association, in Phoenix, on April 14, 1944. Members of the Section present were: Dr. Thomas Hartgraves (Phoenix), Chairman; Dr. H. S. Faris (Tucson), Vice-chairman; Dr. Maitland S. Dirks (Phoenix), Secretary; Dr. E. M. Hayden (Tucson), Dr. R. Lee Foster (Phoenix), Dr. George O. Hartman (Tucson), Dr. A. L. Lindberg (Tucson), Dr. Maurice Rosenthal (Phoenix), and Dr. W. Warner Watkins (Phoenix). Dr. H. P. Mills and Dr. T. R. Moran, both of Phoenix, were absent, but concur in this report.)

VITAL CAPACITY IN SILICOSIS

W. L. MINEAR, M.D.
Patagonia, Arizona

INTRODUCTION

BLAISDELL has recently demonstrated that it is possible to estimate disability in silicosis by performing various tests introduced by McCann of the University of Rochester, New York. The tests include X-ray to obtain radiographic volume of lungs, spirometer studies, ergometer records and gas analysis. These tests are chiefly used in estimating the "residual air" which is that air still left in the lungs after total expiration and represents about 22 to 27 per cent of the "total lung volume."

The vital capacity is easily obtained by simple spirometer studies and represents about 75 per cent of the "total lung volume." In preemployment examinations the vital capacity test used alone is of value as an indicator of pulmonary reserve and is helpful in evaluating the disability in silicosis without recourse to the more accurate and time consuming methods employing ergometer records, gas analysis and measurement of radiographic volume of the lungs.

In this study the vital capacity test was employed to estimate the pulmonary reserve in 425 miners. In each case X-ray and physical examination was correlated with vital capacity findings. It is the purpose of this paper to review the various factors affecting vital capacity and to present a statistical study of vital ca-

pacity and incidence of silicosis in an unselected group of 425 miners.

VITAL CAPACITY DEFINED AND CLASSIFIED

Vital capacity is the total amount of air which can be forcibly exhaled after a maximal inspiration. It is best measured by a carefully calibrated and counterbalanced water spirometer. Many examination forms require the measurement of the chest expansion; however, this is at best a poor indication of lung capacity due to the fact that many muscular individuals can enlarge the thorax to a greater degree than the lungs are capable of expanding.

First, Hutchinson[7] and, later Dryer[5] and West[10] found that the vital capacity bears a consistent relationship to the surface area of the body. A less accurate relationship was also found between the height and the vital capacity. The difference in the results of these two methods of calculation is about 5 per cent.

Vital Capacity, c.c. per cm. height—

Men	Women	Athletes
25 c.c.	20.0 c.c.	29.0 c.c.

Vital Capacity, c.c. per square meter—

Men	Women	Athletes
2500 c.c.	2000 c.c.	800 c.c.

Dryer[5] and other investigators found that the occupational activity influenced vital capacity. Sedentary workers were found to have a much lower vital capacity than those engaged in heavy labor. Dryer[6], therefore, established three normal classes—A, B, and C. In class A are those normal individuals with maximum vital capacities, as shown in the above table. Class B (not less than 90 per cent of class A) included those normal individuals who engaged in moderately active physical work. Class C (not less than 85 per cent of class A) included those normal individuals in sedentary occupations. Most miners are considered a reduction of 15 per cent below the standard of the class to which the subject belongs as an almost certain indication of some abnormality.

FACTORS INFLUENCING VITAL CAPACITY

When the vital capacity is calculated on the basis of surface area in square meters, it will be noticed that the obese individual, especially the stocky, thick necked, barrel chested type, is at a decided disadvantage. The vital capacity will be found low in most instances. A two meter X-ray film will show a relatively short, pyramidal shaped lung. This explains in part the rapid development of dyspnea in this type on physical exertion. Add the burden of certain types of silicosis to further reduce pulmonary capacity and dyspnea becomes noticeable even when the individual is at rest.

Tall, long chested individuals if normal physically will usually have the highest vital capacities. Two meter X-ray films will show a relatively large lung as compared with the lung of the short, stocky, obese individual. Tall, thin chested individuals, the lean lanky type, will often have surprisingly high vital capacities. Other physiological conditions in normal individuals which may change the vital capacity measurement is anxiety or nervousness. Apparently a certain tenseness of the respiratory muscles including the diaphragm keeps the individual from deep inspiration and forceful expiration. The examiner should repeat the test at a more favorable time if such appears to be the case. A slight increase in blood pressure or pulse rate in an otherwise normal individual often gives the examiner a hint of underlying anxiety in the subject. Vital capacity measurement is best made both before and after the standard cardiovascular test. It will be found that the vital capacity is often slightly increased after exercise.

Occasionally the examiner will encounter an individual who will not be able to "catch on" as to what is meant by deep inspiration and forceful expiration. They do not seem to understand how to blow and often stop blowing before the breath is spent or start blowing before a complete inspiration is accomplished. A little patience and repetition will usually give an accurate vital capacity in these cases. Some individuals believe that they can increase their vital capacities by a "little practice." Usually, however, the vital capacity measurement is no better, often worse after the tenth or twentieth attempt than after the first few trials.

Vital capacity determinations can be calculated on the basis of ideal weight. This calculation will help determine the approximate correction for the factor of excess obesity or leanness. For example, a low vital capacity in an obese individual recalculated on the basis of ideal weight might raise the percentage to nor-

mal. If the corrected vital capacity is still 15 per cent below the class to which a subject belongs, some abnormality probably exists.

Pathological states which lower the vital capacity are various:

1. Pulmonary disease.
 (a) pneumoconiosis
 (b) tuberculosis
 (c) emphysema
 (d) upper respiratory infection
 (e) asthma
2. Intrinsic mechanical interference with respiratory function.
 (a) pericardial effusions
 (b) pleural effusions
 (c) pneumothorax
 (d) tumors, etc.
3. Intrinsic mechanical interference.
 (a) abdominal or pleuritic pain
 (b) abdominal tumors
 (c) rheumatic or arthritic disease of the costovertebral and sternal joints
4. Heart disease. (Frequently associated with advanced silicosis).
 (a) enlargement of pulmonary vessels
 (b) pulmonary edema
 (c) cardiac dilatation or enlargement

The X-ray film of the chest gives a static-impression of differential capacities in the lung substance and from such an impression the physician often assumes that he can tell the functional respiratory capacity of the applicant. The physician is not only interested in the amount of capacity shown in the X-ray film but more important in the functional loss caused by this opacity. Off hand, one might reason that the more opaque the pulmonary tissue became to the X-rays the greater the functional loss. But this is not invariably true. Great reduction in vital capacity can occur with very little X-ray opacity of pulmonary tissue. On the other hand, the vital capacity is often found to be normal in moderately advanced silicosis.

The peribronchial type of silicosis, described in detail by Pancoast[8] can be so easily confused with chronic passive congestion, bronchiectasis, acute or chronic bronchitis and bronchial irritation due to irritant gases that it was thought best to classify these cases roentgenologically under the heading "accentuated hilar and linear markings". These markings are sometimes so dense in the X-ray film that the examining physician would assume a definite reduction in respiratory capacity in such an individual and further assume that he would be a poor industrial risk. However, vital capacity tests show that respiratory function is very good and the vital capacity is often reduced little or none.

The nodular type of silicosis[8] is characterized roentgenologically by discrete white spots on a darker background of well ventilated lung. These nodules are distinct in the earlier stages of nodular silicosis, but in the later stages the nodules coalesce to form larger masses. The nodules or masses tend to be bilateral, symmetrical, and mostly in the mid-lung fields. The vital capacity in nodular silicosis (frequently but not always) is reduced in proportion to the tendency of increase and coalescence of nodules. Nodular silicosis, affects the highly expansile primary lobule of the lung is effective in reducing vital capacity.

It must be emphasized that various pathological conditions may cause a reduction in vital capacity. For example, obesity and cardiac disease in one individual could seriously reduce the vital capacity, even though the X-ray examination of the lungs shows negligible signs of silicosis. On the other hand, if definite X-ray evidence of silicosis is present along with a low vital capacity one should rule out other possible contributing factors.

ROENTGENOLOGICAL CLASSIFICATION AS USED IN THIS SERIES

I. Chest films characterized by "accentuated hilar and linear markings."

Grade I: Bilateral increase in density confined to the hilus.

Grade II: Bilateral increase in density of the hilus and middle lung fields accompanied by small nodule formation following the pattern of the pulmonary tree.

Grade III: Bilateral increase in density of the hilus and all parts of the pulmonary tree accompanied by nodule formation more pronounced than in Grade II. The degree of accentuation is greater than in Grade II. A "diffuse" increase in density is less frequently noticed.

II. Nodular Silicosis: Characterized roentgenologically by discrete round or oval nodules tending to coalesce, most numerous in the middle lung fields and bearing no definite relationship to the bronchial or vascular tree.

Grade I. Scatttered, but definite nodule formation mostly in the mid-lung field bearing no definite relationship to the bronchial or vascular tree.

Grade II: Numerous discrete nodules throughout both lung fields.

Grade III: Coalescence of nodules to form dense areas typified by the "pawnbroker sign" where the three lobes of the right lung lie adjacent.

STATISTICAL STUDY

Twenty-eight (6.5%) of the 425 miners had nodular silicosis. Of these 11 (40%) had vital capacities below 70% and 17 (60%) had vital capacities over 70%. The incidence of low vital capacity (below 70%) in a group of miners showing no roentgenological evidence of lung or heart disease was 3.5%, as compared with 40% having vital capacity below 70% in the group. The low vital capacity in the normal group was due to obesity, whereas the low vital capacity in the silicotics was due to lung or heart pathology. The apparent high vital capacity (above 70%) in some silicotics was due in several instances to leanness or emaciation. When the vital capacity is calculated on the basis of ideal weight, these underweight silicotics have vital capacities below 70%. In questionable cases, this factor of ideal weight should always be considered.

Eight per cent of the 425 miners examined had enlarged hearts and all but two of this group showed clinical evidence of heart disease (mostly hypertensive vascular disease with cardiac enlargement.) The incidence of heart enlargement was over three times greater in the individuals with advanced (Grade III) silicosis than in the remainder of the group. However, the average age of the group with advanced silicosis was 48 years and the incidence of hypertensive heart disease increases with age. The problem of heart disease as related to silicosis requires further study.

The incidence of the adult form of tuberculosis was 6.1%, and of the 425 cases only 3 or 0.7% were active cases. The incidence of tuberculosis is generally considered high in silicosis, but in this group the incidence was surprisingly low.

Again I wish to emphasize that the recording of vital capacity in pre-employment examinations is not intended to act as a test to determine the amount of disability in cases of silicosis, but only as a test to determine pulmonary reserve and guide the physician in his clinical appraisal of the prospective employee.

SUMMARY

1. Vital capacity determination is a simple, inexpensive and valuable aid in pre-employment examinations to determine the pulmonary reserve of the lungs in those individuals exposed to industrial dust hazards. X-ray examinations of the chest constitutes only partial and incomplete evidence concerning the condition of the respiratory apparatus. Correlation of roentgenological findings with vital capacity determinations gives the examiner added information.

2. Increased linear and hilar markings as seen in the X-ray film of the chest does not seem to be related to serious impairment of the pulmonary reserve. Uncomplicated, early nodular silicosis shows little or no impairment of pulmonary reserve whereas advanced and complicated silicosis definitely causes serious loss of pulmonary reserve.

ther exposed to harmful concentration of silica dusts. An individual having a normal vital capacity below 70% should be considered a poor industrial risk if that individual is to be fur-

3. An individual having definite roentgenological signs of silicosis with a vital capacity should be considered a fair industrial risk despite definite roentgenological evidence of uncomplicated silicosis.

4. Accentuated or increase linear and hilar markings were found in 73% of the miners. Six and five-tenths per cent of the miners had nodular silicosis. Eight per cent of the 425 miners had enlarged hearts, the incidence of en-

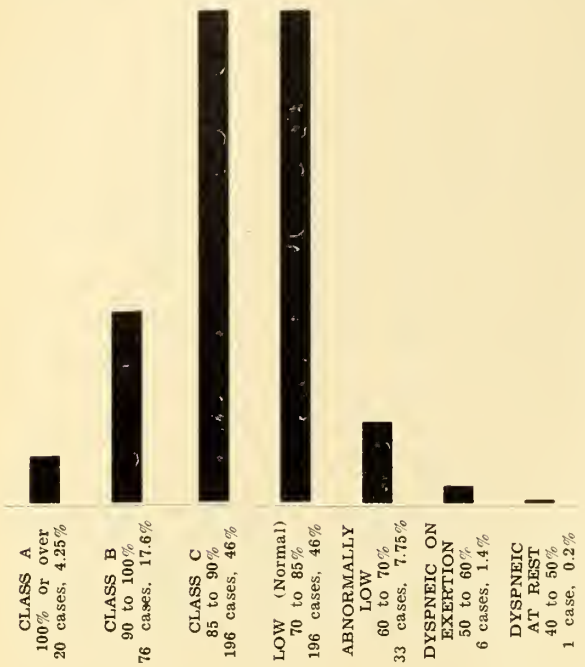
CHART SHOWING INCIDENCE OF SILICOSIS

Accentuated Linear Markings	% of Total	Average Vital Capacity	Average Age	Average Yrs. Underground
Grade I	41.8	81 50-106	29.4 18-48	3.6 1 mo-30 yrs
Grade II	27.1	81.5 65-105	32 20-49	6.2 4 mo-25 yrs
Grade III	4.2	75.5 63.9-100	44.5 19-47	13 1 mo-18 yrs
Normal	20.5	80.3 60.5-93	26.5 26-55	1 yr-1 mo 4 yrs-28 yrs
Nodular Silicosis Grade 1	.93 4 cases	83.3 (79-86)	25.5 (24-26)	4.5 2 yrs-7 yrs
Grade 11	2.7 (12 cases)	71% (79-86)	37 (26-51)	18 (5 mo-27 yrs)
Nodular Silicosis Grade III	2.7 (12 cases)	68.8 40-81	46.8 32-58	14.7 5 yrs-35 yrs

largement being three times greater in those individuals with advanced nodular silicosis. Incidence of pulmonary tuberculosis was 6.1% with 0.7% proven to have active tubercular lesions.

5. Although miners are moderately active and should have vital capacities between 85% and 90%, this study shows that they have average vital capacities in the low normal group. In other words, the pulmonary reserve of the average miner is definitely below par. On the other hand, only 9.35% of the 425 miners examined had vital capacities below the critical level of 70%.

DISTRIBUTION OF VITAL CAPACITY IN 425 MINERS



BIBLIOGRAPHY

1. Arnett, J. H., Vital Capacity of the Lungs; changes occurring health and disease. J. Clin. Inves., 1935, 14,543.
2. DuBois, E. F., Basal Metabolism in Health and Disease. Lea & Febiger, 1937. 6, pp. 119-120.
3. West, C. H. and Taylor, N. B., The Physiological Basics of Medical Practice. 2nd Edition, Williams and Wilkins, 1939. XXX, pp. 505-512.
4. Cole, L. G. and Cole, W. G., Pneumoconiosis (Silicosis). John B. Pierce Foundation, New York, 1940.
5. Dryer, G. Lancet, 1919. 2,227.
6. Dryer, G., The Assessment of Physical Fitness, etc., London. 1920.
7. Hutchinson, J. Todd's Encyclopedia of Anatomy and Physiology. 1850, 4 p. 1016.
8. Pancoast, H. K., and Pendergrass, E. P., Pneumoconiosis (Silicosis). pp. Hoeber, 1926.
9. Pancoast, H. K., and Pendergrass, E. P., Roentgenologic Aspect of Pneumoconiasis and its differential diagnosis. Jour. Am. Med. Assn. 101, 587-591. August 19, 1933.
10. West, H. F. A. Arch. Int. Med., 1920, 25, 306.
11. Blaisdell, JIL, Disability Evaluation in Silicosis. Proceedings of the Third Annual Congress on Industrial Health. Chicago, January 13-14, 1941.

SULFONAMIDES IN THE TREATMENT OF CHRONIC BRONCHIAL INFECTIONS

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INTRODUCTION

THE sulfa drugs have so far been found of greatest value in the treatment of acute infections. They have been found somewhat helpful in certain subacute and chronic infections. Their effect has been least remarkable when the lesions are walled-off or in poor contact with the circulation, or when the causative organism has been poorly affected by the drugs.

The treatment of pulmonary and bronchial infections has been considered to conform to this general pattern. Bronchitis, bronchiectasis, and lung abscess have not been noted to be frequently or dramatically cleared.

Bronchiectasis is one of the conditions which present themselves in Arizona in an advanced but hopeful state. Some improvement may follow residence here, but by their very nature the lesions continue to cause unpleasant local symptoms. The usual prognosis of bronchiectasis is quite gloomy, with a downhill course, marked by exacerbations and complications.

The causes of bronchiectasis are still controversial. Acute disease of the bronchial walls (often virus in origin); chronic sinus infection; bronchial obstruction; distortion of the lung by fibrosis or atelectasis; and even heredity and stress factors may play lone or combined parts in starting or continuing the condition.

The destruction of the mucosa, the fibrosis in the walls, the dilatation and stenosis of the lumina, and the pooling of the purulent secretions are all results which prevent ready healing. The habit-formation, an occasional mental sluggishness, and the very chronicity may also obstruct the use of helpful methods.

TREATMENT METHODS

Clinicians have leaned heavily upon postural drainage as their best single method of treat-

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ment. Bronchoscopy has been helpful in some cases, when available. Removal of a fibrotic and pus-filled lobe from one or even both lungs has been modern and, at times, curative. Unfortunately, many patients are not eligible for surgery, especially if it must be bilateral. Most patients and physicians would avoid surgery if possible.

Sulfonamides have been suggested as treatment for bronchial infections by several authors but the results have been published by very few. Norris reported ten cases in which the drugs had been used, but this was incidental to a study of the concentration of drugs in the bronchial secretions and a study of the effect on respiratory flora. He gave sulfadiazine or thiazole in full doses orally for from four to fifteen days. The concentration in the bronchial secretion was about 60% of the blood level. He noted that in every case there was a marked reduction in the volume of sputum. Daily sputum volumes ranged from 12 to 285 cc. and were reduced from 55% to 81% for an average reduction of 69%. It was difficult to judge the effect on the bronchial flora, since spontaneous changes often occurred, but in general the susceptible organisms were reduced in number (strepococci, H. influenzae, Neisseria catarrhalis, etc.) He recommended the oral use of the drug, preferably during the hospitalization, and the combination with bronchoscopic aspiration in any non-surgical case.

Arizona's John Stacey used the method of Castex to introduce sulfa drugs into the bronchial tree. He described symptomatic improvement in a small series of cases when ½ to 1 cc. of a 5% solution of sodium sulfathiazole was nembulized into the lungs once or several times a day. He mentioned three tuberculous patients with chronic purulent lung infections and two chronic bronchiectatics who were benefitted.

Norris considered that insufflation was too ineffective, however, and that the drug concentration lasted too briefly, especially in purulent secretions.

CASE MATERIAL

The present study is drawn from the use of sulfadiazine, sulfamerazine and occasionally sulfathiazole in 48 cases with purulent bronchial secretion. In some of these the diagnosis was chronic bronchitis (11 cases); in some, bronchial asthma with bronchitis (11 cases); and in some, bronchiectasis (16 cases). There were also 10 cases in which the bronchitis was associated with tuberculosis (6), or strange complications which modified the process (4).

The bronchiectasis cases form the major part of the report. Data on the other cases are mentioned incidentally and for contrast.

Attention was drawn to the value of sulfonamide therapy by experimentation with its use in other chronic infections, and by a chance usage. A patient with severe bronchiectasis was treated with sulfadiazine for a meningococcic meningitis. By the tenth day the meningeal disease was controlled and the sputum had abruptly decreased from 200 to 10 cc.

METHODS OF STUDY

The methods of study were simple. All but three of the patients were ambulatory. They had all been fluoroscoped and X-rayed. Bronchograms had been done at some previous time on all those with bronchiectasis. Sputum quality had been checked by observation; sputum quantity measurement or repeated estimation in common terms. No bacterial studies were done except to exclude tuberculosis. Blood counts were done only as indicated, or at intervals in cases with long drug usage. Fluids were forced, and gross observation of the urine was urged. Alkalinization was not regularly used. Every patient was requested to report by telephone every 48 hours until used to the drug, or whenever any of a list of toxic symptoms occurred.

X-rays or transillumination had been done in each case of sinus disease. The presence of an allergic diathesis was determined chiefly by history; skin-tests were used only where detailed data were desired.

Patients with acute respiratory infections have been excluded from the series. All cases had purulent sputum to some degree.

All patients had lived in Tucson for a control period before chemotherapy was tried. Most of those with bronchiectasis had tried postural drainage abortively in the course of the disease, but were reinstructed in the procedure for a fair trial before the use of sulfonamides.

RESULTS OF TREATMENT

A. An analysis of the series with pure *bronchiectasis* shows the following points of interest:

1. The age of the patients was from 9 to 43 years with an average of 24.5 years.

2. The duration of symptoms varied between 1 and 25 years, with an average of 8.1 years.

3. Fifteen of the 16 cases had a well-established chronic sinus infection.

4. Only two of the cases had gross atelectasis.

5. The daily volume of sputum ranged between 20 and 800 cc. for an average of 173 cc. per patient. It was noted to be predominately purulent in all cases.

6. Sulfadiazine was the sole sulfonamide used in five cases; sulfamerazine was used alone in three cases; diazine and merazine were each used in six cases and these two and thiazole were tried in sequence in three cases.

7. The entire series is too small for evidence on tolerance. It was similar to that reported in the literature. In only one patient was it impossible to find a suitable drug. Diazine and merazine were equally well tolerated except in two cases. Thiazole was the best drug in two cases.

Symptoms of intolerance were the same as usually reported. Hematuria and skin rashes were very rare.

8. The results of treatment of *bronchiectasis* are as follows:

a. The sputum was reduced in all cases. The percent reduction was 95, 80, 80, 95, 50, 50, 50, 80, 80, 60, 50, 30, 25, and 40% in the various cases. The average was a 62% decrease. The least reduction was in the cases having atelectasis, cystic disease, and an odorous sputum.

b. A notable clinical gain was made in 14 of the 16 cases.

c. An improvement in the sinus condition was noted in nine cases.

d. Neither of the two cases with recurrent hemoptyses had further bleeding after start of the treatment.

9. Symptoms tended to recur in a period of weeks to months after treatment was discontinued. Acute respiratory infections always resulted in a need for re-starting the drugs.

10. Drug dosage could be reduced to half a gram three times a day (sulfadiazine), with continued freedom from symptoms.

11. A bronchogram was repeated for comparison in only one case, ten months after the start of treatment. There was no remarkable change in bronchial dilatation.

B. The 11 patients with *bronchitis* were slightly different clinically from those with bronchiectasis. Only one had a notable sinus infection; none had atelectasis. The sputum volume averaged about 10 cc., was muco-purrulent in all cases. The drug administration was usually limited to two weeks; the tolerance was average.

Five patients were noted to have made a clinical gain after use of the drug. Surprisingly, the sputum decreased in volume in 7 of the 9 cases, usually being reduced to from 50 to 80%, and often being called less purulent.

C. The 11 patients with *chronic bronchitis and a clinical allergy* showed the following characteristics:

1. Four had sinus infections.

2. All had asthma; five also had allergic rhinitis; four also had hay fever.

3. The sputum volume was slightly greater than in pure bronchitis (25 cc.), but was also muco-purulent in all but one case.

4. The drug tolerance in this allergic group actually was a bit worse than in the other groups. Four patients were made ill by the drugs—about double the usual incidence.

5. Only three of the patients were noted to have gained clinically when the sulfa drugs were in use. Only three of the 11 noted a definite decrease in the sputum volume (50, 30 and 75%).

D. The six patients with *pulmonary tuberculosis and an excessive bronchitis* were not remarkably affected by sulfonamides, probably due to the indefinite source of sputum. Only one was infectious. The drug tolerance was fairly good. Three of these patients were helped immediately on several occasions for acute increases of purulent secretions.

E. Four cases were so complicated as to be considered separately.

(a) A white male, aged 21, had had a purulent bronchitis for two years, metastatic lymphnode abscesses, and a subacute peritonitis. Sulfadiazine repeatedly reduced his sputum and fever, but never produced complete clearance.

(b) A white male, aged 55, was found to have ancient and contracting silicosis, with

hard massive tuberculous lesions near the upper hila. The purulent bronchitis was of two years' duration. The 200 to 400 cc. of sputum decreased 50% in a week, and he became much more comfortable.

(c) A white male, aged 24, had come to Tucson to avoid surgery for a migrating lung abscess. Sulfa drugs helped clear his sputum, but failed to prevent a putrid recurrence.

(d) A white male, aged 48, had developed a sub-diaphragmatic abscess after a gastric resection. This produced a fistula through the diaphragm, pleura, and into the bronchus. A purulent sputum and drainage had existed for months. Both sulfadiazine and merazine produced an almost immediate healing, a 100% decrease in sputum, and an improved general condition.

SUMMARY AND CONCLUSIONS

1. The administration of sulfonamides by mouth has been found regularly effective in all cases of simple, uncomplicated bronchiectasis. Atelectasis and putrid secretions have been associated with a decreased efficiency of the drugs.

2. Tolerance has been about as expected except in cases known to be clinically allergic, where it was decreased.

3. There is no reason to believe that the lesion structure of bronchiectasis will change, though progress may be prevented by sulfonamide treatment.

4. It is recommended that sulfonamides be used in non-surgical cases and for pre-operative therapy. It should be combined with such agents as postural drainage, bronchoscopic aspiration, climate, and treatment of the sinuses.

5. Close clinical control of patients taking sulfa drugs should be exercised.

6. The imminent availability of penicillin for similar cases will make an interesting contrast study.

PEPTOGENIC ULCER IN MECKEL'S DIVERTICULUM

(Case Report)

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MECKEL'S diverticulum is derived from the omphalomesenteric or vitelline duct which in early fetal life connects the mid gut with the yolk sac. Normally, the duct closes during the fifth week of fetal life. A Meckel's diverticulum results when the distal end closes and the ileal end remains open; it is located usually from one to three feet proximal to the ileocecal valve and is almost always on the anti mesenteric border of the ileum. Occasionally, it has a mesentery. This diverticulum occurs in about 2% of all people with a ratio of about 2 males to 1 female.

Histologically, Meckel's diverticulum has the same coats as the ileum and is usually lined with ileal mucosa. In about 25% of diverticula heterotopic mucosal variants are found[1]. The chief variants are gastric mucosa, duodenal, jejunal and pancreatic. Schaetz[2] in a study of 32 specimens found gastric mucosa in 16.6%, duodenal and jejunal 10%, pancreatic 2.7%. Hudson and Koplick[3] in 23 specimens studied found gastric mucosa in 52%. Hudson[4] in 13 cases reported gastric mucosa in 7 and duodenal in 1. Carlson[5] in a study of 152 cases of Meckel's diverticulum found heterotopic tissue in 27.6%. Sacks[6] states that an average figure of 13% represents a conservative estimate of the incidence of gastric mucosa in Meckel's diverticulum.

The chief complications of Meckel's diverticulum are intestinal obstruction, diverticulitis with or without perforation, peptogenic-like ulceration with complication of hemorrhage or perforation or both, intussusception, foreign body and neoplasm.

Denecke[7] was the first (1902) to report an ulcer in Meckel's diverticulum. Deetz[8] five years later pointed out the occurrence of gastric mucosa and stressed the peptogenic character of ulcer in Meckel's diverticulum.

Schaaf[9] in his analysis of the fluid contents of the diverticulum removed by him found it to contain 40% free hydrochloric acid and 70% total acidity. Matthews and

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Dragstedt[10] showed experimentally the small bowel becomes progressively more sensitive to gastric juices as the distance from the stomach increases. They have produced typical chronic ulcers of the Meckel's diverticulum type by anastomosing small Pavlov pouches to the lower end of the ileum. Lindau and Wulff[11] pointed out the secretion of the hydrochloric acid from the gastric mucosa in a Meckel's diverticulum, "begins or increases synchronously with the activity of the stomach —a time during which the small bowel is empty and when no neutralization takes place by food and intestinal juice. In such manner, especially favorable conditions are created for the generation of peptic lesions, a circumstance we find borne out by an occurrence of these ulcers in Meckel's diverticulum even at an early age." It is their belief the process in Meckel's diverticulum supports the biochemical theory of the origin of the ulcer.

Reviews of the literature of peptic ulcer in Meckel's diverticulum were made by Johnston and Renner[12] in 1934 and Cobb[13] in 1936. Cobb reviewed 100 cases of ulcer or probable ulcer. In 66 cases gastric mucosa was demonstrated microscopically. In the remaining cases no microscopic examination was made or no gastric mucosa was found. Seventy-four percent of the cases fell in the age group of 15 years or under, ages varied from 2 weeks to 53 years. Eighty-one of the ulcers occurred in males and 14 in females. In 5 the sex was not stated; the sex distribution approximated that of duodenal ulcer. The principal symptoms were abdominal pain (80%) (51 of 55 perforated cases and 29 or 43 non-perforated cases) and intestinal hemorrhage (72%). Hemorrhage occurred with equal frequency in the perforated and non-perforated groups. Next to hemorrhage perforation was the most frequent and certainly the most serious complication. It occurred in 55 of the 100 cases and there was a mortality of 36%.

The ulcer is usually single but may be multiple. The ulcer has been found, with few exceptions, at the base of the diverticulum at the junction of gastric and ileal tissue rather than within the heterotopic mucosa. In this manner these ulcers are analogous to marginal ulcers following gastroenterostomy. The ulcers may be acute or chronic. They are subject to the same complications as duodenal or gastric ulcer, hemorrhage, perforation and obstruction. The latter may be extrinsic or intrinsic. Waugh, Herrell, and Crumpacker[14] reported two cases of intrinsic obstruction due to scarring of ulcers in Meckel's diverticulum.

The cardinal findings of ulcer in Meckel's diverticulum are hemorrhage, abdominal pain, and incidence in the younger age group. The complication of hemorrhage and perforation occurs most frequently in individuals below the age of 15 years.

Hemorrhage is the most constant symptom. It is usually sudden in onset and massive in character, and it may be so profuse as to be the direct cause of death. The blood passed by rectum may be bright red or black, tarry, unclotted or partially clotted. If perforation does not develop, the patient is likely to recover from hemorrhage and have recurrence at a later date. The importance of hemorrhage and its recurrence over a period of days or months or even years as a diagnostic sign was pointed out in 1932 by Mason and Graham[15]. Hemorrhage may occur simultaneously with perforation or may precede it by days or months.

Abdominal pain may simulate that of duodenal ulcer. Cobb has pointed out the pain may be periodic and colicky; postprandial pains usually occurred in adults. In children particularly, the only history of pain was usually with the occurrence of perforation. With frank perforation the pain is characteristic of perforated viscus with peritonitis.

The diagnosis is based on the age of patient, massive intestinal hemorrhage and abdominal pain. Rousseau and Martin[16] reported a case in which a preoperative diagnosis of Meckel's diverticulum was made by X-ray, and in the survey of the literature found 12 other cases reported. The diagnosis by X-ray is not satisfactory. In the differential diagnosis the exclusion of the common causes of massive intestinal hemorrhage and abdominal pain must be made.

The surgical treatment is resection of the diverticulum with a cuff of the ileum and closure of the defect, transversely, or resection of the diverticulum with a portion of the ileum and repair either by end-to-end or lateral anastomosis.

The mortality in the uncomplicated case is practically nil; however with massive hemorrhage and perforation the mortality is high.

CASE REPORT

A 23-year-old white male was admitted to the hospital on November 17, 1942, complaining of severe pain in the mid abdomen. About 4 a. m. he was awakened from sleep with sudden severe knife-like pain in the region of the umbilicus. At the time of onset of symptoms, he became nauseated, remained nauseated, but did not vomit. He continued to have acute abdominal pain which became progressively severe. At no time did he have bloody or tarry stools. There was no history of previous gastrointestinal complaints.

The past history was not remarkable except for fracture of left humerus in 1933. The family history was not contributory.

Physical examination revealed a well nourished and developed male, 5 ft. 8 in. in height, weighing 140 lbs., and was lying in bed with legs and thighs flexed. He was acutely ill; his cheeks were flushed. He was conscious and co-operative.

Head, eyes, ears, nose, mouth, throat and neck were all negative. The chest was symmetrical; respiration was shallow and of the thoracic type. The lungs were negative to palpation, percussion and auscultation. The heart rate was 108, BP 126/78, otherwise the heart was negative.

Over the lower two-thirds of the abdomen there was board-like rigidity and tenderness; however this was more marked in the region of the umbilicus. In the latter area there was both maximum rebound and referred rebound tenderness. Peristalsis was diminished. Brittain's sign was negative. Rectal examination revealed some tenderness high up on either side, Genitourinary findings were negative, side. Genito-urinary findings were negative, and the extremities were normal.

The laboratory procedures consisted of a blood count which showed RBC 5.01, HB 83%, WBC 15,200 with 84% polys, 3 juveniles, 23 stabs, 58 segments. Urinalysis was negative

A preoperative diagnosis of an acute surgical abdomen, probably due to a perforated ulcer or a perforated appendix, was made.

The abdomen was explored under spinal anesthesia supplemented with ether. When the abdomen was opened, a considerable amount of non-odorous, slightly grayish fluid was found in the lower abdomen, most of which appeared to be on the right side. The peritoneum showed moderate punctate injection, characteristic of that seen in perforated peptic ulcer. The appendix was thick, injected, and gave the appearance of a peri-appendicitis. The terminal ileum was investigated and a Meckel's diverticulum was found about 20 inches proximal to the ileocecal valve. At the junction of the ileum and diverticulum, anteriorly, there was a matchhead size perforation. The diverticulum was roughly cone shaped and measured 4 cm in length and about 2 cm in diameter at the base; it was indurated, edematous, and maximum reaction was around the site of perforation. There was a short thick indurated mesentery. The diverticulum was freed from its mesentery and was resected along with cuff of the ileum. The defect in the ileum was repaired with two rows of continuous catgut suture and reinforced by attaching a free piece of omentum to the line of suture. Five grams of sulfathiazole were sprinkled in the abdominal cavity. A penrose rubber drain was inserted down to the peritoneum at the lower angle of wound.

The microscopic examination of the diverticulum showed on one end of the section villi which were consistent with glands of the ileum. This type of mucosa abruptly changed into a thick layer with columnar type of surface epithelium and elongated glands most of which were in cross sections. The inner-most glands were slightly dilated and contained a parietal type of cell scattered among the larger chief or secretory cells. In one area the mucosa was completely denuded and there was necrosis of the entire wall. This was associated with infiltration of polymorphonuclear leukocytes. The muscularis mucosa was intact except in the area of ulceration. In the musculature there was a fairly diffuse lymphocytic and leukocytic infiltration throughout the section. The serosa was moderately thickened and there was purulent exudate present which was most marked around the area of necrosis. The diagnosis was

Meckel's diverticulum containing gastric mucosa and a perforated ulcer.

The patient was quite ill for the first two postoperative days. He developed a suppurative cellulitis of the operative wound which was incised and drained on the eleventh postoperative day. The patient was last heard from nine months after operation at which time he stated he had continued to be well.

CONCLUSIONS

The cardinal findings of peptogenic ulceration, intestinal hemorrhage, abdominal pain, and incidence in the younger age group; the complications, perforation, hemorrhage, intestinal obstruction in a Meckel's diverticulum were briefly reviewed.

Case report of a young male adult with acute perforation of ulcer in Meckel's diverticulum containing gastric mucosa of the acid secreting type without previous history of abdominal complaints or intestinal hemorrhage was presented.

BIBLIOGRAPHY

1. Matt, J. G., and Timpone, P. J. Peptic Ulcer of Meckel's Diverticulum: Case Report and Reviews of the Literature. Am. J. Surg. 47:612-622, 1940.
2. Schaetz, G. Beitirage zur morphologie des Meckleschen Divertikels, Beitr z. path. Anat. 74:115, 1925.
3. Hudson, H. W., Jr. and Koplick, Harold H. Meckel's Diverticulum in Children: New England Jour. of Med. 206: 827-840, 1932.
4. Hudson, H. W., Jr. Meckel's Diverticulum in Children; 2nd Clinical and Pathology Study with Reports of 13 Additional Cases. New England Jour. of Med. 208:525-535, 1933.
5. Carlson, L. A. quoted by Waugh (14).
6. Sacks, Milton S. Massive Intestinal HeHorrhage from Meckel's Diverticulum: Report of 2 cases. Bulletin of the School of Medicine, University of Maryland 27:197, April, 1943.
7. Denecke: Ueber die Entzuendung des Meckelschcen Divertikels und die Gangraen desselben. Dutsch Ztschr. f. Chir., Vol. 62:523, 1902.
8. Deetz, E.: Perforations peritonitis von einem Darmdivertikel mit Magenschleimhautbau ausgehend. Deusche Ztschr. f. Chir., 88:482, 1907.
9. Schaaf, G.: Beitrag zur Bildung des Ulcus Pepticum in Meckelschen Divertikel Deutsch. Ztschr. f. Chir., 238:78-87, 1932.
10. Matthews, W. D. and Dragstedt, L. R. Etiology of Gastric and Duodenal Ulcer, Especially in he Light of Ulcers in Meckel's Diverticulum and the Postoperative Ulcers in the Jepunum. Surg. Gynec. and Obst., 53:621, 1931.
12. Johnston, Lloyd B., and Renner, George. Peptic Ulcer of Meckel's Diverticulum: Report of 2 cases and a Review of the Literature. Surg. Gynec. and Obst., 59:198, August, 1934
13. Cobb, Donnell B. Meckel's Divericulum. Peptic Ulcer Ann. Surg. 103:747, May, 1936.
14. Waugh, John M. and Herrell, Wallace E. and Crumpacker, Leo K. Peptic Ulcer in Meckel's Diverticulum Causing Intrinsic Intestinal Obstruction: Repor of 2 cases Surg. 2:385-391 (March) 1942.
15. Mason, J. M., and Graham, G. S. Ulceration of Aberrant Gastric Mucosa in Meckle's Dverticulum, a Source of Intestinal Hemorrhage. Ann. Surg. 96:893, 1932.
16. Rousseau, J. P. and Martin, A. G. M., III Radiology 40:605 (June) 1943.

CYSTIC DISEASES OF THE LUNG

By DR. ERNEST C. REED

Prescott, Arizona

IT was not proposed to cover the entire field of cystic disease but to emphasize one type of which there had been three cases recently seen in the Veterans' Hospital. This type in the past has been variously called cystic degeneration of the lung; congenital cystic disease of the lung; pulmonary pneumocysts; bullous emphysema; cystic bronchiectasis, and more recently the names pneumocele and pneumatocele have been suggested.

The congenital etiology is open to much question because most patients give a history of pertussis; pneumonia; frequent colds or exposure to occupational dusts. The condition is seen in both sexes and the ages of reported cases varies from nineteen to seventy.

Pathologically there are found multiple, large thin walled sacs of various sizes, containing air and with tiny tortuous bronchial connections. Should a ball-valve mechanism develop in this connecting tube the affected cyst may enlarge rapidly and cause an acute episode of dyspnea as serious as sometimes occurs in spontaneous pneumothorax.

The symptoms commonly suggest asthma or asthmatic bronchitis; at least many of the patients have considered for a long time that they were affected with asthma. Diagnosis is made on the basis of x-ray film appearance, although the atypical asthmatic history; tendency to hyper-resonance and distant to absent breath sounds found on examination may suggest the condition. The roentgenogram shows an area of rarefaction usually at the apex or base of one or both lungs without any distinct border, and gradually blending with the areas where typical lung markings are seen.

The condition as shown by X-ray may remain stationary for many years or show varying rates of progression. Rupture of a cyst may result in collapse of a lobe or a lung and a film illustrating such a complication was shown. Empyema may follow such an accident. Diag-

Read before Yavapai County Medical Society, February 17, 1944.

nostic pneumothorax has been done to more clearly demonstrate the condition; but this procedure has its hazards and at least one death has been reported following such a procedure. Pneumothorax does not benefit the patient but only further embarrasses his respiration.

X-ray films were shown of three cases seen the past winter; one showed bilateral apical involvement extending down to about the second rib and apparently stationary over a period of two years; a second showed gradual progression of a less extensive condition over a period of three years and this patient was brought into the meeting for questioning. The third case was one of upper lobe involvement in a patient with advanced pneumonoconiosis; no progression over two years; the man had died of a brain abscess and autopsy had demonstrated the condition previously shown by X-ray. This lung, with one large thin walled air sac of tennis ball size and numerous smaller ones below it, was demonstrated by Dr. Wilkiemeyer, and photographs were shown of the lung as it appeared just after removal.

Pulmonary hypertensive heart disease may develop in the patient with advanced long standing cystic degeneration.

X-ray film showing induced pneumothorax was shown to contrast with the appearance of cystic degeneration and bring out the differential points. There is no known cure of the condition and patients so afflicted should try to avoid exposure to respiratory infections; seek a mild climate at not too high an tltitude and avoid more than moderate physical exertion.

PHYSICIAN-ARTISTS' PRIZE CONTEST

The American Physicians Art Association, with the cooperation of Mead Johnson and Company, is offering an important series of War Bonds as prizes to physicians in the armed services and also physicians in civilian practice for their best artistic works depicting the medical profession's "skill and courage and devotion beyond the call of duty."

Announcement of further details will be made soon by the Association's Secretary, Dr. F. H. Redewill, Flood Building, San Francisco, Calif.

ARIZONA MEDICINE

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Vol. 1 July, 1944 No. 4

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Editorials

The Bedside Manner

One of the most important characteristics of great men in medicine who have inspired and deserved our admiration and affection is the "bedside manner." The term as used here connotes depth of learning and sincere concern for the patient which is the only sound basis for confidence in a doctor. This "manner" has been and is seen at its best in consultation in the sick room for here the consultant observes meticulous consideration for his fellow practitioner, whose gues he is for the moment. There is nothing finer than this relationship in medicine.

Recently a Washington physician was quoted as saying that something should be done to prevent physicians from suggesting to patients that they have been carelessly or badly treated at the hands of a previous attendant. The implications in this statement are that doctors as a rule are unfair to each other. It can be safely said that rarely does a physician with malice of forethought disparage another practitioner in the presence of a patient. On the other hand, physicians have not always been as diligent as they might be to explain to a patient coming to them from another doctor that a sense of dissatisfaction or distrust may be based on misunderstanding or a faulty evaluation of results. Withholding a judiciously favorable comment on a colleague may really leave a physician open to serious criticism. For, as Robert Louis Stevenson observed, "One may

sit in a room and listen in silence while a friend is attacked and leave the room having more completely condemned his friend than if he had spoken."

It is not meant to suggest that malpractice should be condoned or defended but merely that physicians be extremely cautious and fair toward a previous attendant when they find themselves being credited with exceptional ability and judgment. Indiscretion is usually a boomerang might just as well be swung gently and carry a message of good will, to restore confidence to a doubting and unhappy patient, returning to give the sender a feeling of satisfaction in a deed well done.

Possibly the noise and confusion of the times may tend to dim the appeal of the Golden Rule. More, perhaps, than ever before we are called upon to be our brother's keeper. To serve our brother best, we must observe proper rules of conduct actively rather than passively. The Rule does not say we must not do unto others what we do not want them to do unto us but rather do unto others as we would have them do unto us. This, it would seem, is the keynote of the "manner" at the bedside as regards our fellow physicians. A fine "Bedside Manner" in the office, on the street, and even "off the record" is the medical man's attribute.

J. W. L.

Reprinted from *Medical Annals* of the District of Columbia, May, 1944.

Silicosis and the Arizona Occupational Disease Law

Elsewhere in this issue there will be found a supplementary report from the Subcommittee on Silicosis of the Arizona Medical Association, outlining the X-ray findings in this condition as they should be reported in order to conform to the definition of "silicosis" as contained in the Occupational Disease Law of Arizona.

Silicosis will become increasingly important to the medical profession of Arizona. Up to now, the number of claims have been few, because of the time limits set up in the law, by the anxiety of workmen to continue at work, if they can possibly do so, and by the need of employers for workers which has made them overlook physical conditions in many instances. With the ending of war, the curtailing of production in the mines, and the return of former workmen who have been serving in the armed forces, many present employees will be released. There will be a very natural desire on the part of such released workmen, if they have silicosis, to seek compensation for disability.

The medical profession should become well informed as to what constitutes disabling silicosis, and what is not recognized as such under our law. The report (see elsewhere in this journal) on the X-ray findings will be followed in subsequent issues by the other papers on silicosis, prepared by the several members of the Subcommittee. They will be a valuable reference work for all doctors in the state, because few will escape having to deal with this subject from some angle.

It All Began With the Pigeons

By now most people know the story of the pigeons and how they demonstrated the usefulness of microfilm. It happened in Paris when it was besieged in 1870 during the Franco-Prussian War. The French army headquarters at Tours wanted to get messages through the German lines. And so the photographer Dagron offered to take microphotographic equipment out of Paris in balloons. He escaped to Tours and sent messages back on film. Then he finally reached the army disguised as a wine merchant with his cameras in hollow wine barrels and he sent back to Paris over one hundred thousand messages on microfilm strapped to the quills of homing pigeons. (1)

That is how it began—the idea of transporting the written word in miniature and on film. But the possibilities of microfilming have not come to an end yet. About fifteen years ago a prominent New York banker conceived the idea of photographing bank checks as a means of keeping a permanent record. Within a short time the banking world, engineering concerns, insurance companies and numerous other types of organizations began to see the possibilities. And, now, medical record rooms and libraries have discovered microfilm, also.

The advantages to a library—and in this instance to a medical library—are many. For, with the use of microfilm the wealth of the resources in medical literature are at the disposal of any one possessing a film projector. Such

have been manufactured in various shapes and sizes. The one now in the Lois Grunow Memorial Library is a desk projector. The reader sits in front of the unit and turns the film at his convenience to read or study the information filmed. Illustrations such as photographs, charts, cut sections of tissue, and X-rays are clearly visible.

The purpose of microfilm is not to replace printed material, but to make available the information which would otherwise be difficult to obtain either because the original reference is oo valuable to lend, or because the information requested is too new to be reproduced in quantities available to all.

The Army Medical Library of the Surgeon General's Office in Washington, D. C., has initiated the Photoduplication Service. For a few pennies for postage this library will send a film copy of any article or book in that library. Incidentally, it is the largest and most complete medical library in this country and ranks with the most famous medical libraries of the world.

The resources of the Lois Grunow Memorial Library are open to any physician in Arizona. And so, with the microfilm service of the Army Medical Library and with the use of the microfilm reader in the Lois Grunow Memorial Library, the physicians of Arizona have at their disposal the wealth of the medical literature of the world.

LOIS GRUNOW MEMORIAL LIBRARY
Mary Elsie Caruso, Librarian.

(1) Litchfield, D. H. and Bennett, M. A. Microfilm reading machines. Special Libraries 34:15-20, January, 1943.

County Medical Society Life Memberships and Endowment Funds

In the July issue of the MISSISSIPPI VALLEY MEDICAL JOURNAL (Quincey, Ill.) Swanberg advocates the establishment of Endowment Funds and Life Membership plans in all but the smaller County Medical Societies. "This plan affords the member an opportunity of paying his full dues during his most productive years and while his income is greatest, thus avoiding the burden of dues later in life." Since Life Membership fees can be declared a professional expense when filing income taxes their actual cost is not great. The present era of high incomes and high income taxes thus provides an ideal time for making an investment in one's County Medical Society. The actual cost of a Life Membership is considerably less than the amount paid since 27 to 57% (depending on the surtax net income) represents tax savings. If Life Membership fees are invested in war bonds and placed in an Endowment Fund, it will further help the government finance the war, a patriotic undertaking of which every loyal American physicial wants to be a part.

Swanberg also states that "physicians, as a class, have not been generous with their contributions to medical organizations, and it is high time efforts were made to correct this situation." He feels that "the physician should give more consideration to making direct contributions or remembering his County Medical Society in his will; such contributions, at this time, represent substantial tax savings so that the amount contributed costs considerrably less than the actual contribution."

HIGHLIGHTS IN THE HISTORY OF NATURAL QUININE

(Digest of an article by Norman Taylor, in the July, 1943, Scientific Monthly. Mr. Taylor is Director of the Cinchona Products Institute, New York).

Natural quinine is found exclusively in the bark of cinchona trees which grew originally in South American countries. Its first use in the treatment of malaria is not consistently recorded in history. How quinine arrived on the European continent is also a subject of conflicting stories. However, it is first mentioned in European medical literature by a Belgian, Herman van der Heyden in 1643.

For the next 200 years quinine was extracted from cinchona bark on a large scale to be used as the only effective anti-malarial drug. England and Holland in the 1850's attempted to start cinchona plantations respectively in India and Java, because the cinchona supply was dwindling in South America. Their efforts were unsuccessful because the type of cinchona seed they used produced a tree with a very low quinine content, too low to produce practically.

In the romance-packed history of quinine, the story of Charles Ledger is outstanding. After a series of adventures, Ledger selected

a cinchona type tree which he considered to have the highest quinine content. One pound of seed from this type, which now bears the Ledger name, was sold to the Dutch Government cinchona plantation in Java in 1865. With this pound of seed the Dutch established plantations which in 1941 produced over 1000 tons of quinine. Java had become the source of nearly all the world supply of quinine.

Since the seizure of Java by Japan in March, 1942, strenuous efforts have been made by this country to conserve the quinine supply on hand and to establish new cinchona growing areas.

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COUNCIL MEETING

The Council convened at the Westward Ho Hotel, Phoenix, on July 16, to transact their summer's business prior to fall activities. Present were: Drs. Dan L. Mahoney, Walter Brazie, Chas. P. Austin, Frank J. Milloy, C. E. Yount, O. E. Utzinger, E. Payne Palmer, F. W. Butler, J. Newton Stratton, Robert S. Flinn, Jesse D. Hamer. Absent were: Drs. Hal W. Rice and Geo. O. Bassett.

Business transacted: 1. Dr. Geo. O. Bassett was elected Chairman of the Council to serve for 1944-1945.

2. The Agricultural Workers Health and Medical Association Hospital (Burton-Cairns) at Eleven Mile Point in Pinal County was reported closed by order of the Board of Directors, San Francisco office, as of June 30. The Report is printed in this issue of Arizona Medicine.

3. Dr. Milloy reported on the Associated Hospital Service of Arizona, stating that the organization was still existent but had been inactive for lack of some one to push it. He further stated that a young man was now inter-

ested in promoting the plan and that something might come of it. The insurance plan adopted by the Associated Hospital Service is in line with the Blue Cross and can become a member by meeting a specified membership, and showing a $5,000 reserve which latter the association in question now has. No formal action was taken by the Council, the Committee on Medical Economics already studying such plans.

4. President Mahoney reported to the Council on various matters. The new program of Vocational Rehabilitation, as discussed at the Annual Meeting, was again before the Council for final clearance A list of physicians in the state certified by various specialty boards was approved by the Council for submitting to the Direcor of Vocational Rehabilitation for appointment to an Advisory Committee. Our members are urged to accept appointment to this Advisory Committee if selected in their regular fields of specialties by the State Agency for this purpose. The matter of appointment of the medical member to the State Board of Institutions for Juveniles was also discussed. The term of Dr. M. W. Westervelt as a member of this board expired last February 1. The law requires of the Governor that he request the Council of the Arizona State Medical Association a list of three names from which he shall select one to present the Senate for ratification. Such a list was submitted the Governor at his request last spring when the special session of the legislature was sitting but appointment is still pending.*

5. The Report of Harold W. Kohl, M. D. (Lt. Colonel, M. C.). was read and accepted. The report appears elsewhere in these columns. Dr. Hamer, as alternate-delegate and who was also in attendance, reported verbally on interesting discussions and actions of the House of the A.M.A. See the A.M.A. Journal for June 24 for complete Minutes of the House.

6. The Council confirmed numerous appointments to the various committees as submitted for its consideration by President Mahoney. A Committee roster appears in other columns of this issue.

7. The Council voted to continue the present series of Health Education radio programs over the Arizona Network, and considered expanding its programs beginning with January next.

8. It was voted by the Council, Dr. Chas. P. Austin, Chairman of the Committee on Scientific Assembly, opening the matter for discussion, that a group of instructors from some oustanding and nearby medical college be invited to present the scientific program for the Annual Meeting as was done with marked success last year. Dates for the Annual Meeting, subject to the approval of the host (Pima) society, for the meeting for 1945 were tentatively set for April 28 and 29. The meeting place is to be Tucson as the sessions alternate between Phoenix and Tucson under By-law provision.*

9. A report from Dr. Chas. S. Smith, Chairman of the Committee on Procurement and Assignment was heard and accepted. The report appears elsewhere in this issue.

10. Dr. Jesse D. Hamer, chairman of the Committee of Public Policy and Legislation, reported on pending national and possible state legislation relating to the practice of medicine. Of this, the membership will hear more at a later date.

11. An informal report was heard from the treasurer, Dr. C. E. Yount, showing a paid-up membership of 284 at this time.

Adjournment was 3:30 P. M.

Frank J. Milloy, M. D.,
Secretary

REPORT OF THE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

To the members of the Arizona State Medical Association:

The 1944 session of the House of Delegates of the American Medical Association at the Palmer House, Chicago, was attended by your delegate and by Dr. Jesse Hamer, alternate delegate and delegate-elect. It is well that it was so because your delegate found himself obligated to leave Chicago for his station in Florida on Wednesday, June 14th, before the

* Dr. F. W. Butler, of Safford, was appointed on July 30 by the Governor to serve on this board.

* A group of Instructors from Baylor University (Texas) was present at the Scientific Program.

adjournment of the House. A supplementary report will be submitted to the Arizona Association by Dr. Hamer, covering business transacted and not referred to in this report.

Dr. George Dock was awarded the Distinguished Service Medal by the House on the second ballot. Other names presented this year to be voted upon, together with that of Dr. Dock, were Dr. Isaac A. Abt and Dr. Simon Flexner. Dr. Dock is noted for his work on the pathology of malaria and dysentery, protozoan diseases of the blood, pernicious anemia, the ductless glands, and hookworm. He is 84 years of age. Dr. Dock has been on the teaching staff at the University of Pennsylvania School of Medicine, Texas Medical College, University of Michigan Medical School, Washington University, and University of Southern California School of Medicine. He was vice president of the International Medical Congress at Moscow in 1897 and at London in 1913. He at present resides in Pasadena.

Dr. James Paullin, the retiring president of the American Medical Association, in his address stated among other things that some state societies are at odds with the House of Delegates on broad policies. Many comments are heard among the Doctors of America that the American Medical Association does not truly represent the views and desires of American doctors. Dr. Paullin conjectures that the open disagreement of state societies with the American Medical Association is largely responsible for that undercurrent of opinion. Generally speaking, your delegate cannot help but feel, after five years in the House, that state societies must continue to stimulate the national body to deep thought in the consideration of the changing way of things in this country. The American doctor must show the way in the post war reconstruction period where Medical matters are concerned. The County and State Societies are those integrals which must be the meeting places for American physicians to contemplate the current problems of organized medicine, to conceive ideas based on personal contact experience with existing trends, and to formulate plans and suggestions to be transmitted to the American Medical Association. The parent body must then in turn be sympathetic and understanding with her component societies, giving careful consideration to ideas and suggestions emanating therefrom, in order that our future may be secure as free physicians, and as a healthy national organization.

The California Delegation introduced a resolution approving and endorsing the creation of the United Public Health League was reported on unfavorably by Committee and was not adopted by the House of Delegates.

The California Delegation also introduced a resolution that certain of the officers of the American Medical Association, including the editor, Dr. Morris Fishbein, be replaced and that Dr. Olin West be commended "for his long valuable and faithful service to American medicine, expressing the gratitude of the profession for that service, assuring him of our affection and promoting him to the office of Secretary Emeritus for life." That resolution was reported on unfavorably by Committee and the House voted not to adopt it, by a vote of 144 to 9.

The Reference Committee on Medical Education reported upon the present status of enrollment in our medical schools throughout the nation. Since there is no deferment by the Selective Service of students not yet in medical schools, and since the Army Specialized Training Program has been curtailed, it appears that approximately 43% of the necessary enrollment in medical schools, to continue a normal production level, must be obtained from the physically disabled and from women. The Council on Medical Education and Hospitals is in constant touch with problems and developments along this line under the able direction of Dr. Ray Lyman Wilbur of Stanford University.

A Council on Post War Planning was established by vote of the House of Delegates to weigh the problems of the post war period including those of some 55,000 physicians who are now in the armed services and who hope to be returned to their several communities with the advent of peace. Many will desire residences, refresher courses in their respective specialties, and aid in obtaining suitable locations in which to resume practice. This Council is charged with the huge and important task

of presenting adequate solutions to these problems.

American Medicine now as ever is meeting all challenges and acquitting itself in a highly commendable manner.

Your delegate is grateful for having had the opportunity to serve you during the past five years and has considered that service an honor and a privilege.

H. W. KOHL

REPORT ON PROCUREMENT AND ASSIGNMENT OF PHYSICIANS

To the Council,
Arizona State Medical Association:

A report of the conference on P&AS held in Chicago June 13, 1944 is herewith presented for your consideration.

Insofar as Arizona is concerned, there are hardly any physicians, who have not previously been rejected for physical reasons, whom we can declare available. At the present moment I do not know of any Arizona physician who is being considered for availability. According to the last official figures given me Arizona has approximately 195 physicians in the Armed Forces. I have not had time to check this list thoroughly, but the above figure is approximately correct.

There are at present 54,096 physicians in the Armed Forces. As a result of the Army cut in its specialized training program, there will be in 1945 enough Army students to fill only 28% of the places; the Navy will supply 31%, and 41% presumably will be available for women and physically disqualified men.

As a result of Selective Service policy of eliminating deferments of pre-medical students after July 1, it is assumed there will result a shortage of physicians available for the civilian population. Of approximatetly 6400 places to be filled in 1945, 3400 can be filled by the Armed Forces, leaving about 3000 to be filled from the ranks of women and physically disqualified men. Half of the latter number, according to present experience, will obviously be left unfilled unless there is some modification of existing policies.

Dr. Lahey summarized the Board's position as follows: (1) Selective Service should defer pre-medical students and (2) P&AS is unwilling to support, at the present time, a program calling for the return of soldiers on active duty to fill medical school vacancies.

Dr. Barton, Executive Officer, P&AS, explained that with more than 54,000 physicians in the Army and Navy, there are few left who can still be considered available. Since one of P&AS dual responsibilities is civilian care, close scrutiny must now be given to each individual case before an availability is granted. Dr. Barton explained that the Central Office is reviewing all availabilities in order to make sure that a danger point is not reached. He emphasized also that equitable distribution of practitioners is now a major responsibility of the Service and that although relocations are difficult to effect in many cases, "We must do what we can with whatever weapons we have."

There are at present approximately 400 physicians in practice in Arizona; insofar as I know, with the possible exception of Grand Canyon, Arizona, there are no areas in the state suffering from lack of medical care.

With the changing of the status of many physicians; some coming into the state, others leaving the state, I am finding it very, very difficult to keep my "fingers" on each physician. My work could be made much easier if the Secretary of each county medical society would report to me any change in the status of any physician residing in his county. Washington is demanding more than ever before a report on EACH physician in Arizona, and for me to be able to send an intelligent report —one that is authentic, I seek the aid of every physician in the state to this end, viz: report any "newcomers" or any leaving the state direct to me.

I am truly most grateful for the cooperation extended me by the members of our statewide committee and the Council of the Arizona State Medical Association.

Respectfully submitted,

CHARLES S. SMITH, M. D.
Chairman State of Arizona, Procurement and Assignment Service for Physicians.

REPORT OF BURTON-CAIRNS HOSPITAL, AGRICULTURAL WORKERS HEALTH AND MEDICAL ASSOCIATION, ELEVEN MILE POINT, ARIZONA

As a report to the Council on the Burton-Cairns Hospital at Eleven Mile Point, I quote from the minutes of the meeting of the directors' meeting of the Agricultural Workers Health and Medical Association held at Berkeley, California on June 9, 1944.

"The disposition of the Burton-Cairns Hospital was then discussed, and Dr. Mott suggested that since there have been very few patients in the hospital with the cost averaging about $20 per patient day during May, the hospital should be closed. It is hoped that arrangements could soon be made for another agency or group to run the hospital until such time as it would again be needed by the Agricultural Workers Health and Medical Association.

Dr. Thomas agreed that the cost at present was uneconomically high with only fourteen patients at present in the hospital.

Mrs. Montagne stated that arrangements could be made for the patients now in the hospital who needed extended hospitalization. It was the general opinion that it would be best to lease the hospital to a non-profit organization rather than to private practitioners. Dr. Mott stated that there is a bill before Congress appropriating ten million dollars for tuberculosis control and that, if it should pass, it is highly probable that some group could make use of some of these funds in order to operate this hospital as a tuberculosis center."

It was the duty, as I understood it for Mrs. Helen Montague, General Manager of the Agrienltural Workers Health and Medical Association for Arizona, to supervise the closing of the hospital. Her statement as to such closing follows:

"According to the instructions by the Board of Directors of the Agrienltural Workers Health and Medical Association, the hospital (Burton-Cairns) was closed June 30, 1944. The patients that needed further hospitalization were transferred to hospitals in Phoenix. A full time caretaker has been retained."

The above covers the most recent action in relation to the Burton-Cairns Hospital under the management of the Agricultural Workers Health and Medical Association in Arizona.

Signed
CHARLES A. THOMAS, M. D.
Member Board of Directors for Arizona.

July 12, 1944.

Staff Meetings

AMERICAN COLLEGE OF CHEST PHYSICIANS

At the annual meeting of the American College of Chest Physicians held at Chicago, Ill., June 10-12, 1944, Dr. Charles S. Kibler, Tucson, was re-elected as Regent of the College for District No. 12 comprising the states of Arizona and New Mexico, for a term of three years.

Dr. Howell S. Randolph, Phoenix, was elected Governor of the College for a term of three years.

Physicians from Arizona who attended the meeting were:

Dr. Hilton J. McKeown, Phoenix
Dr. Howell S. Randolph, Phoenix
Dr. Benson Bloom, Tucson
Dr. Charles S. Kibler, Tucson
Capt. Peter Amazon, M.C., Coolidge.

MARICOPA COUNTY MEDICAL SOCIETY

Monday Evening, May 1, 1944, 8 P. M.

Scientific Program

1. The Pathogenesis of Silicosis:
 Maurice Rosenthal, M.D.
2. The Classification of Silicosis—from a Radiological Viewpoint:
 W. Warner Watkins, M.D.
3. Some Clinical Aspects of Silicosis:
 Louis B. Baldwin, M. D.

GOOD SAMARITAN HOSPITAL

(Phoenix)

APRIL 24, 1944

Program

I. An Unusually Large Ovarian Cyst
 Dr. Louis P. Lutfy
II. Case of Dissecting Aneurysm of Aorta With Rupture
 Dr. John W. Pennington

MAY 22, 1944

I. A Questionable Case of Periarteritis Nodosa
 Dr. Norman A. Ross
II. A Case of Chirrosis of the Liver
 Dr. Robert S. Flinn

JUNE 26, 1944

I. Angioma of Ovary in 6-Year-Old Girl
 Dr. Robert T. Phillips
II. Basal Cell Carcinoma in 16-Year-Old Girl
 Dr. Louis G. Jekel
III. Case of Coronary Occlusion
 Dr. Ben Pat Frissell

ST. JOSEPH'S HOSPIAL STAFF

(Phoenix)

MAY 8, 1944

I. Review of Literature on Treatment of Burns
 Resident Staff

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II. Idiopathic Purpura Haemorrhogica Fulminans
Dr. A. E. Cruthirds

JUNE 8, 1944

I. Present Status of Penicillin Therapy
Dr. R. Jannett

II. Carcinoma of Lung With Metastates in Brain
Dr. Robert H. Stevens

Clinical Pathological Conferences

F. W. 58-year-old white woman.

March 15, 1944: The patient was perfectly well until three weeks ago when she began to develop an aching pain between the shoulders which she treated with a mustard plaster. Five days later jaundice developed which has persisted to the same degree since. Associated with this there has been nausea and vomiting, at first ten to eleven times a day and then two to three times a day, which has continued. The stools have been light colored on a few occasions, though they are usually brown. The dull ache between the shoulders has recurred several times a day since its onset, and for the past four days there has been an almost constant dull ache to the right of the umbilicus, occasionally radiating down to the left lower quadrant. Eating greasy foods has always made her "billious."

In December, 1943, she passed part of a "tape worm"; had lost 30 pounds of weight previous to this, and began to develop boils. She believes she has lost a little weight again with the present illness. With the tape worm episode she was given some medicine which she took for a few weeks, the nature of which is not known.

Physical Examination: Temperature 98.6; pulse 110; respirations 40; blood pressure 114/64. The patient is a markedly jaundiced white female lying in bed in moderately acute distress, complaining of pain between the shoulder blades and in abdomen. Sclera are jaundiced. Edentulous. Heart normal. Lungs: moist rales at both bases with bronchial breath sounds at right base posteriorly. Abdomen: distended and rounded, ++ rigidity in right upper qaurant, +++ tenderness in right upper quadrant, and ++ in left upper quadrant and + in right lower quadrant; ++ rebound tenderness right upper quadrant, left upper quadrant, and right lower quadrant. Peristalsis is absent. Liver percussible 2 cm. below right costal margin. No masses. Percussion note is hyperresonant with no fluid wave. No costovertebral angle tenderness. Rectal and pelvic negative except for slight tenderness high in cul-de-sac.

Blood: Hh. 83%, Wbc. 36,850; P. 92%, L. 8%.

Urine: 250 cc., dull greenish in color. Albumin O, sugar O, bile +.
Sp. Gr. 1.020.

Pottenger suction started and patient feeling better with less abdominal pain and tenderness.

3-16-44. 3:00 a.m. Temperature 100°. Patient feeling a little better.
7:45 a.m. Temperature 102°. Pulse 100; less pain but rigidity persists.
1:30 p.m. Patient cold and clammy; semistreporous. Cardia rate 100. Blood pressure 0/0. No response to caffeine sodium benzoate. Patient died in a few minutes after this.

NPN 53. Urine diastase normal. Icteric index 51.

A/G 3.6/2.1. Blood diastase less than 60. Prothrombin content less than 5%.

Blood Wassermann and Kahn—negative.

DR. WILLIAM DOCK: This 58-year-old woman entered the hospital on March 15th, three weeks after the onset of an aching pain in the back, between the shoulders. While such a pain most often is due to arthritis, it might have been due to an upper abdominal or to a mediastinal lesion. A few days later jaundice was noted, but in the two weeks that followed did not deepen, remaining constant. This is most unlikely to have been obstructive jaundice, since it did not rapidly deepen, and even the jaundice of acute hepatitis, which is suggested by the intense nausea, should have darkened during the first two weeks. The pain of acute hepatitis or yellow atrophy may be typically biliary, with gall-bladder tenderness and is seen not rarely in fatal cases, although it is rare in the benign or common forms. The shift of the pain into the para-umbilical region and left lower qaudrant suggests carcinoma or acute inflammation of the pancreas.

The patient had no significant past illness except for recent furunculosis and treatment for tape-worm. The latter seems too long ago to explain the liver disease, the boils may have been a source for visceral abscesses with hemolytic jaundice, but in the absence of chills and fever this is most improbable.

The patient on entry was afebrile, but the pulse and respirations were so rapid as to suggest shock. The jaundice is definite, the liver slightly enlarged and there are the classical physical signs of peritonitis. This certainly suggests suppurative biliary tract disease, with a terminal peritonitis, possibly but not necessarily due to perforation or rupture of the duct or gall-bladder.

The high white count also fits into the picture of sepsis, but in leptospiral jaundice and

Presented before Arizona State Medical Association, Phoenix, April 15, 1944.



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rarely in acute yellow atrophy there is marked leucocytosis. The description of the stools, and the relatively low icterus index of 51 seem to rule out obstructive biliary tract diease. There may, however, be pylephlebitis, arising in a buried appendix perhaps, or an ascending biliary tract infection without obstruction. The normal diastase makes pancreatitis a remote possibility, but does not rule out a cancer of the body of the pancreas. The latter often is a cause for pain and nausea. The severity of the nausea at the onset of jaundice, and the very low prothrombin fit better with an acute hepatitis.

The fever became apparent, shock more profound and death occurred, presumably from peritonitis, in 24 hours. Peritonitis is not a rare cause of death in cirrhotics, but this patient has normal serum protein and no leucopenia, which rule out cirrhosis as far as I am concerned in a case with the other findings here present.

My first bet would be acute hepatitis, possibly due to leptospirosis, and terminal peritonitis. But this diagnosis is not confidently held, and ascneding biliary tract disease or pylephlebitis are good probabilities. There is no real evidence of cancer.

Anatomical Diagnosis

DR. EDWARD M. BUTT: Anatomical Diagnosis: Carcinoma of Head of Pancreas.

STAFF MEETING, ST. JOSEPH'S HOSPITAL

The case is that of an 8-year-old child, who first entered the hospital because of secondary optic atrophy of the left eye. Her history is that she lived with a sister who had died of pulmonary tuberculosis. Birth was normal and she had a normal infancy. Pertussis at 2 years followed by frequent colds ever since. Chicken pox at 3; last summer had a headache over the left eye, vomiting, fever and extreme nervousness for several days and ever since, she has had this type of headache.

For about two months, she could not see out of the left eye at all.

X-rays of the head show sinuses are well developed and are transparent; the selle is irregular in shape and possibly slightly enlarged. Optic foramina are normal in size and shape and are alike on each side. Chest—mitral configuration of the heart, increased hilar densities; apparently not a tuberculous reaction.

Two years later she again entered the hospital unconscious, vomiting and choking. Mother states that that morning, the patient complained of burning sensation over her eyes and was coughing up mucus. After about an hour, the mother found her in bed, unconscious and called the doctor. Previous to this, the patient had been in apparently good health. As to drugs, the patient has had only aspirin. Loss of sight in the left eye.

Comparison of X-ray with film previously taken shows the same configuration of the heart; not much change in the hilar densities. On the skull films, there is no definite change in the bone densities and no change in the sella. Laboratory findings—blood sugar 180 mg.

Progress notes state that the child entered the hospital in a comatose condition with flaccid extremities. Shortly after entering, the temperature shot up—from 99 to 104° and cyanosis and convulsions developed. Blood pressure varied from 130/100 to 110/80. Cyanosis and heart failure that afternoon resulted in death.

DR. R. LEE FOSTER: The radiologist becomes accustomed to aproaching the diagnosis of a case with the X-ray findings as the first clue. Right or wrong this habit develops since the X-rays are practically always his first knowledge of a case, and all too frequently the only information he is given with which to work.

In this case the positive X-ray finding which no one has disputed is a mitral configuration of the heart with increased hilar densities and the latter the radiologist did not believe due to a tuberculous reaction. The outstanding condition which would produce a mitral configuration of the heart in a child of this age would be a rheumatic fever. However, when we consider the other X-ray finding, namely, an irregular and possibly enlarged sella, it is hard to fit it with a rheumatic fever. Although rheumatic fever can produce focal vascular lesions in the brain they are rare and would hardly cause sellar changes. There is, however, a disease which may simulate rheumatic fever, often complicates it and is even considered by some as an atypical form of the same disease. I'm speaking of Sydenham's Chorea.

Now if we consider this possibility in the light of the clinical history, physical findings, and course of this patient's illness, we find that it fits rather nicely in most respects with the acute form of Sydenham's Chorea with brain lesions and optic neuritis.

The disease is most frequent between ages 5 to 15 years and occurs 2½ times as frequently in girls as boys. Rheumatic fever and other acute infections predispose to it and may accompany it. This patient is a female, 8 years of age, and had pertussis at the age of two years followed by frequent colds since.

The onset may be sudden or very gradual. There is usually headache, anorexia, constipation and occasionally vomiting. Fever is usually low grade. The severity of the disease varies greatly. The cardinal symptoms are spontaneous, usually ataxic, movements, weakness and usually phychic changes. If we consider the "nervousness" spoken of in the first attack

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as being possibly mild choreiform movements, the patient has all of these things.

Although a fatal termination is rare, it does occur in the acute cases as about 1 to 2% and is most often due to cardiac complications.

Brain complications are not infrequent and in fact the pathological lesion is a low grade meningo-encephalitis, and cerebral congestion with hyperemia and numerous thromboses are usually found through the brain and meninges. Embolism of the central retinal artery may occur and an optic neuritis is not at all infrequent. Gowers states that the swelling from the optic neuritis may occasionally become large enough to simulate a cerebral tumor. Hyperpyrexia, vomiting and any other symptoms of intracranial disturbances may occur.

Here then, if we are not too insistent on the presence of violent choreiform movements as a necessity to diagnosis, is a case which could well be an acute attack of chorea with an optic neuritis which recovered and recurred two years later as another acute attack, again with optic neuritis, and progressing rapidly to a fatal termination due to cardiac failure from cardiac complications with intracranial involvement as a contributing factor.

I present that as a possible diagnosis.

ATROPHY OF THE OPTIC NERVE

DR. CHARLES N. PLOUSSARD: This affection occurs either (1) as a *primary* disease (simple, gray, non-inflammatory or progressive atrophy) or (2) *secondary* to some other affection of the nerve or retina (neuritic, postpapillitic, or inflammatory atrophy); in the latter class belong also *retinitic* and *choroiditic* atrophy.

Symptoms

There are reduction in the acuteness of vision, concentric contraction or irregular or sector-shaped peripheral defects of the field first for colors and then for form, diminution in the light sense, sometimes *scotomata*, and *color blindness* (first for green, then for red, then for blue). These symptoms tend to progress and end in complete *blindness*.

OPHTHALMOSCOPIC SIGNS depend somewhat upon whether the type is primary or secondary:

Primary Atrophy: The *disc is white, grayish*, or bluish-white, its *edges are sharply defined* and regular, its size is somewhat diminished, and it presents a saucer-shaped excavation; the *lamina cribrosa* is often seen very *plainly;* the minute vessels of the disc have disappeared; the retinal vessels may appear normal or the arteries may be diminished in calibre.

Postpapillitic atrophy: The *disc is dense white* or grayish in color, sometimes with a bluish tint, its margins *irregular* and somewhat *hazy*, its minute vessels lost and it is covered by connective tissue resulting from the organization of the previous exudate; on this account the lamina cribrosa is hidden; the retinal arteries are narrow, the veins normal in size or distended and generally tortous and both sets are apt to be enclosed by *white lines*.

Retinitic and Choroiditic Atrophy: The *disc* has a grayish-red or *yellow*, waxy appearance, its outlines are somewhat *indistinct*, the *vessels* are exceedingly *narrow* and many disappear entirely, and the retina presents evidences of the antecedent choroiditis or retinitis.

After a time, the differences in the appearances of simple and postneuritis atrophy become much less marked.

It should be borne in mind that the *disc varies in color in health* and may appear atrophied as the result of congenital or senile peculiarities, although vision is normal and the field perfect; hence the diagnosis in many cases cannot be made from the ophthalmoscopic signs alone, especially when these signs are not pronounced.

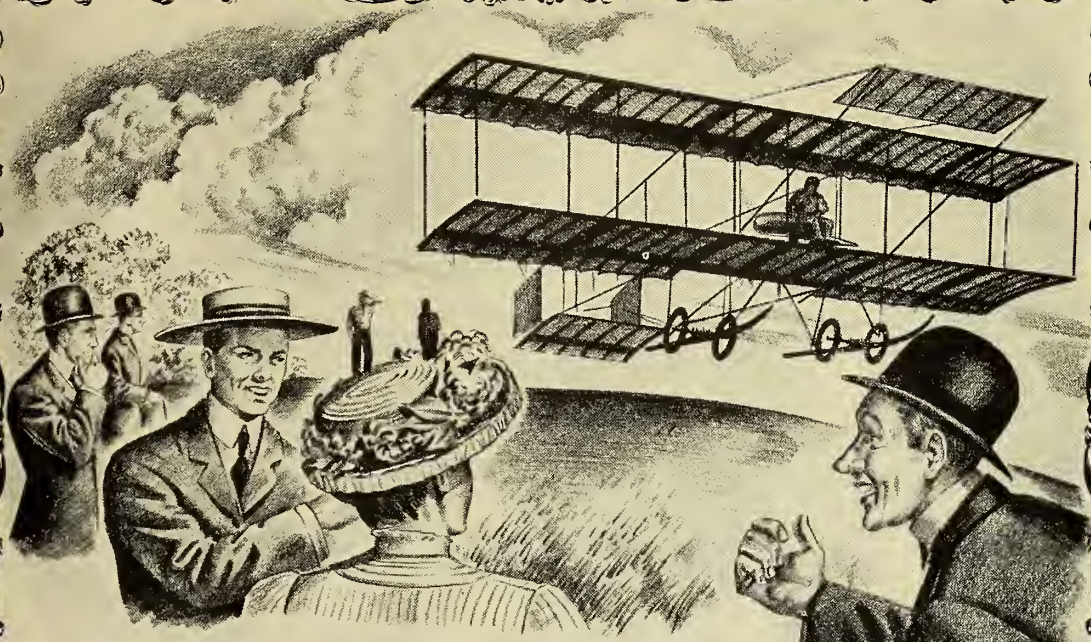
ETIOLOGY: Simple atrophy is frequently due to spinal diseases, especially locomotor ataxia, developing as an early symptom in one-third of the cases of this affection. It is common also in affections of the brain, especially disseminated sclerosis, general paralysis of the insane and tumors. It may also be due to syphilis, malaria, diabetes, acromegaly, impaired nutrition, arteriosclerosis, and certain poisons (including wood-alcohol). Occasionally it is hereditary, and in some cases no cause can be found. Hereditary cases occur in young adult males, involve the papillo-macular bundle, are accompanied by central scotoma, and the affection is known as *Leber's Disease*.

Secondary atrophy follows choked disc, descending neuritis, ccc pigmentary degeneration of the retina, and embolism and thrombosis of the central artery; it may also be consecutive to choroiditis retinitis, glaucoma, hypophysis disease, and orbital inflammations. It may result from injury to the optic nerve due to fracture of the orbital canal, following a blow or other violence; in such cases the atrophy does not show itself for a number of weeks, though reduction of vision and contraction of the field or even blindness ensues immediately.

Diagnosis

(1) Brain tumor
(2) Brain abscess
(3) Diabetes.

DR. VIRGIL TOLAND: It is unfortunate that the findings in the right eye are not given for this is a condition where the ophthalmologist could definitely help the clinician in establishing a diagnosis. From the oculist's viewpoint there are three likely possibilities depending upon the findings in the other eye. The first is a retinoblastoma. If the right eye was negative, the left eye might have contained this



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tumor, which could have been confused with an optic atrophy, and metastasized along the optic nerve into the brain accounting for the cerebral symptoms. However, cases of retinoblastoma rarely live to be eight years old. The second possibility is a Foster Kennedy syndrome. Primary optic atrophy in one eye, and papilloedema in the other. This syndrome is pathognomonic of frontal lobe tumors, the tumor arising in one frontal lobe presses on the corrseponding optic nerve causing atrophy then keeps on growing until it causes increased intracrainial pressure and a choked disc in the other eye. The third condition is a Juvenile Form of Amaurotic Family Idiocy. If the opposite eye also showed a primary optic atrophy and the patient had developed symptoms of idiocy then this could have been the cause of death.

Pathological Report

DR. TERESA R. MORAN: *Brain:* The scalp is incised and the calvarium removed. There is an increased amount of sub-arachnoid fluid present. The confolutions are somewhat flattened and the sluci are shallow. On lifting the anterior lobes considerable hemorrhage is found present on the lower surface. This extends into the pituitary region and around the base of the brain. The sella tureica is broadened. The eliniod processes are absent and a large growth occupies the sella and extends around the pons and is seen to involve the left optic nerve. This growth is light brown in color and markedly edematous. It is in the region of the optic chiasma and the pituitary gland. No pituitary gland is found present. The brain is preserved for section after fixation.

Anatomical Findings

1. Ependyma of brain involving
 (a) frontal lobe
 (b) optic chiasma
 (c) optic nerve
2. Cerebral hemorrhage intraventrienlar and subarachnoid.
3. Passive hyperemia of viscera.

THE AMERICAN CONGRESS OF PHYSICAL THERAPY

Will hold its twenty-third annual scientifie and clinical session September 6, 7, 8 and 9, 1944, inclusive, at the Hotel Statler, Cleveland, Ohio. Rehabiliation is in the spotlight today, Physical Therapy plays an important part in this work. The annual instruction course will be held from 8:00 to 10:30 a. m., and from 1:00 to 2:00 p. m. during the days of September 6, 7 and 8. The scientifie and clinical sessions will be given on the remaining portions of these days and evenings. All of these sessions will be open to the members of the regular medical profession and their qualified aids. For information concerning the instruction course and program of the convention proper, address the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, 2, Illinois.

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Historian: Mrs. George B. Irvine, Tempe.
War Service: Mrs. Jesse D. Hamer, Phoenix.

MRS. JESSE D. HAMER, NEW NATIONAL PRESIDENT-ELECT WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

The Arizona Auxiliary is proud and happy to report that Clarice Hamer, wife of Dr. Jesse D. Hamer, Phoenix, is the new national president-elect of the Woman's Auxiliary to the American Medical Association. She will take office in 1945.

In accordance with the traditional procedure of the auxiliary, it creates the office of president-elect as well as four vice presidents.

Election was held during the national convention in Chicago June 12 to 15.

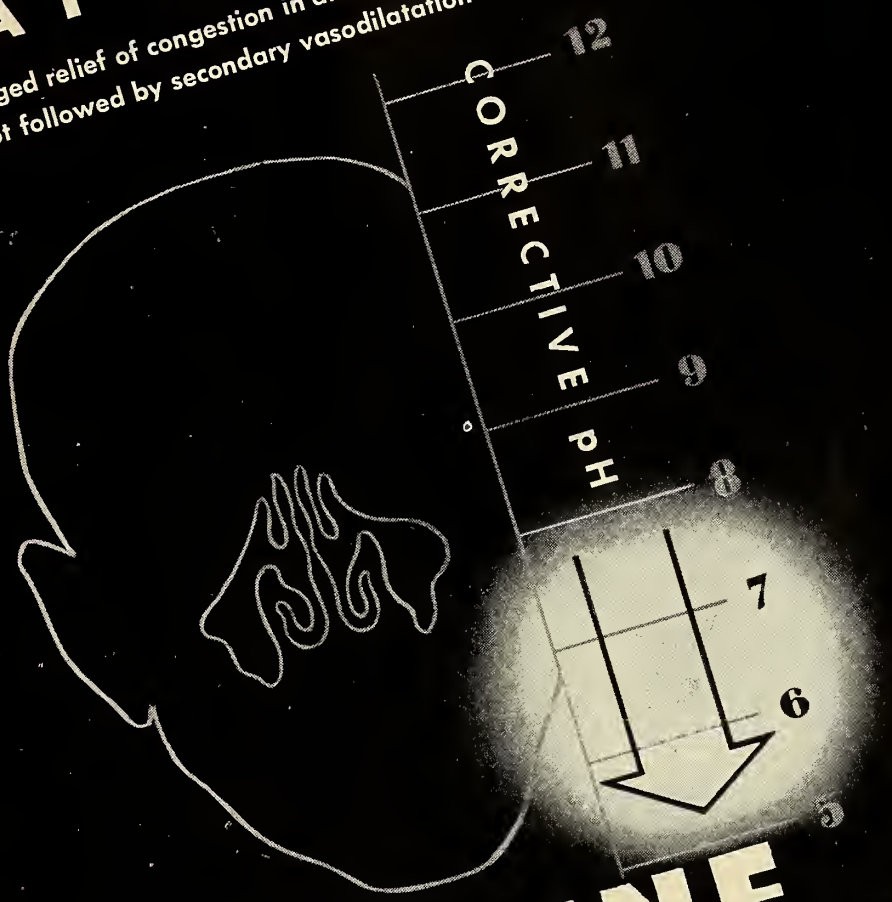
Mrs. Hamer, a registered nurse, has been as active member of the Medical Auxiliary for a number of years and in 1940 became Arizona's state president and a member of the national board. The following year she was made national chairman of legislation, and last year served as a national director.

Other new national officers are: Mrs. David W. Thomas, Lockhaven, Pa., president, who succeeds Mrs. Eben J. Carey of Wauwatosa, Wis.; Mrs. Eustace A. Allen, Atlanta, Ga.; Mrs. J. Howard Hornberger, Roebling, N. J.; Mrs. Arnold Duemling, Ft. Wayne, Ind.; Mrs. David Berg, Helena, Mont.; the four vice presidents; Mrs. A. A. Herold, Shreveport, La., secretary; Mrs. Harold F. Wahlquist, Minneapolis, treasurer; and Mesdames Carey James Simonds (Chicago), W. W. King (Denver), Roscoe E. Mosiman (Seattle), Luther H. Kice (Garden City, L. I.), directors.

MRS. T. A. HARTGRAVES,
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CONVENTION REPORT
WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION
Chicago, Illinois
June 12-15, 1944

The twentysecond annual meeting of the Woman's Auxiliary to the American Medical Association was held at the Knickerbocker Hotel at Chicago, Illinois, from June 12-15, 1944. The president, Mrs. Eben J. Carey of Wauwatosa, Wisconsin, presided over all the sessions.

Monday, June 12th was given over to registration of delegates and guests and the pre-convention board meeting.

The first general session was called to order at 10:00 o'clock on Tuesday morning. The meeting was opened in the usual manner Mrs. M. A. Nix of Illinois gave the Address of Welcome. The Response was given by Mrs. Asher Yaguda of New Jersey. Officers and chairmen of standing committees then gave their routine reports. Mrs. Carey's report stated that the Advisory Council had asked the auxiliary to lend its assistance and support to three major projects during the past year, and that most of the organized auxiliaries had participatetd in all three so far as was possible. The three projects were: Promotion of the Nurse Cadet Corps; the national registration of all graduate nurses and to help defeat the Wagner-Murray-Dingell Bill. The national registration of graduate nurses was postponed at the last minute but the auxiliary members throughout the country were prepared to render whatever assistance necessary to the carrying out of this program in cooperation with the State Nurses' Associations. The chairman of legislation stressed the importance of being ever on the alert regarding medical legislation and mentioned briefly some of the bills now pending. The value of Hygeia was greatly emphasized by the chairman and by Dr. Herman L. Kretschmer as well, who suggested that every doctor shoud subscribe to two issues, one for his home and one for his office.

The War Service Committee, which was created at the annual meeting in 1943, gave an excellent report of the war work done by auxiliary members throughout the United States. They are taking an active part in almost every type of war work which is being done. In many instances they are furnishing the leadership for important projects.

An "In Memoriam" service was conducted. The recorded showed a loss of one hundred thirty-four members during the past year.

The main business transacted during the convention was the adoption of a new Constitution and By-Laws. There were many minor revisions, but the four major revisions concern the membership and duties of the Board of Directors; the standing committees; election and the setting up of a state presidents' conference.

Due to the length of time taken up in considering the Constitution and By-Laws, the state presidents' reports were not read, but will be printed in full in the post-convention Bulletin.

Delegates from almost every organized auxiliary in the United States were present. The total registration was five hundred twenty.

Inspiring talks were given by Miss Reese of Chicago, concerning the Recruitment of Student Nurses; by Vice Admiral Ross T. McIntyre, Surgeon General, U. S. Navy, on "Women and the War"; Dr. Kretschmer, President-elect of the American Medical Association; Dr. James E. Paullin, President of the American Medical Association; Dr. Morris Fishbein, Editor of the Journal of the A.M.A. and Hygeia and Dr. Rollo K. Packard of Chicago, on the subject of the need of some form of prepaid medical care.

The social activities consisted of a tea honoring Mrs. Eben J. Carey, the president, Mrs. David W. Thomas, president-elect and the National Board; a luncheon honoring Mrs. Carey; a luncheon honoring the past presidents and a tour of exhibits and dinner at the Museum of Science and Industry.

All the delegates and guests were deeply grateful to Mrs. Roy M. Hutchison of Chicago and her committee for the fine hospitality extended to them. No effort had been spared in providing excellent entertainment or in making everyone comfortable.

The officers elected to serve for the coming year are as follows: Mrs. David W. Thomas, Lock Haven, Pa., president; Mrs. Jesse D. Hamer, Phoenix, Ariz., president-elect; Mrs. Eustace A. Allen, Atlanta, Ga., first vice-president; Mrs. J. H. Hornberger, Roebling, N. J., second vice-president; Mrs. A. H. Duemling, Fort Wayne, Ind., third vice-president; Mrs. David Berg, Helena, Mont., fourth vice-president; Mrs. A. Herod, Shreveport, La., constitutional secretary; Mrs. Harold F. Wahlquist, Minneapolis, Minn., treasurer; Mrs. James P. Simonds, Chicago, Ill., director; Mrs. W .W. King, Denver, Colo., director; Mrs. Roscoe E. Mosiman, Seattle, Wash., director; Mrs. J. L. Stevens, Mansfield, Ohio, director; Mrs. Luther H. Kice, Garden City, Long Island, New York, director; Mrs. Eben J. Carey, Wauwatosa, Wis., director.

Respectfully submitted,

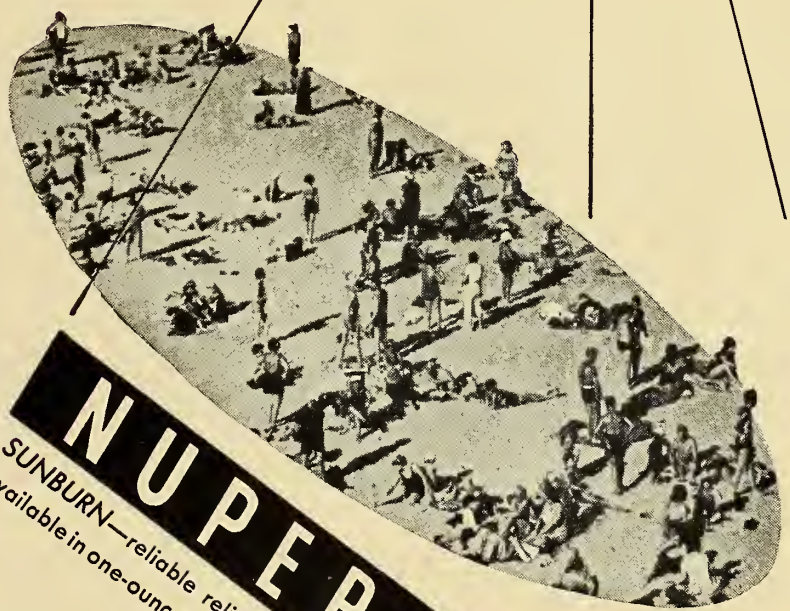
CLARICE H. HAMER
(Mrs. Jesse D.)

Book Reviews

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY
(Twentieth Edition)

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY: By W. A. Newman Dorland, A.M., M.D., F.A.C.S., Lieut-Colonel, M.R.C., U. S. Army; Member of the Committee on Nomenclature and Classifacition of Diseaseh of the American Medical Association; Editor of "American Pocket Medical Dictionary". With the Collaboration of E. C. L. Miller, M.D., Medical College of Virginia. Twentieth Edition, Revised and Enlarged. 1668 pages with 885 illustrations, including 240 portraits. Flexible and Stiff Binding. Philadelphia and London: W. B. Saunders Company, 1944, Plain $7.00. Thumb-Indexed $7.50.

The Twentieth Edition of The American Illustrated Medical Dictionary is off the press. The author tells us that its revisions involved additions and alterations on every page. Compared to older editions much has been added. The 240 portraits of men whose names have become linked with the nomenclature of Medicine is a distinctive feature. Every field of medicine and surgery has been covered, and new drugs, and new diseases which have been added to our daily life, as a result of the participation of our medical men in all parts of the world in the present war, are included.



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F. J. M.

MEDICAL DIAGNOSIS

MEDICAL DIAGNOSIS: By Roscoe L. Pullen, A.B., M.D., Instructor in Medicine, Tulane University of Louisiana School of Medicine; Assistant Clinical Director, Charity Hospital of Louisiana at New Orleans; formerly Fellow in Clinical Endocrinology, Duke University School of Medicine and Duke Hospital, Durham, North Carolina. With a Foreword by John H. Musser, B.S., M.D., F.A.C.P., Professor of Medicine, Tulane University of Louisiana School of Medicine; Senior Visiting Physician, Charity Hospital of Louisiana at New Orleans. 1106 pages with 584 illustrations and 12 colored plates. Philadelphia and London: W. B. Saunders Company, 1944. Price $10.00.

This book of over a thousand pages on Medical Diagnosis, and applied Physical Diagnosis, is divided into 30 chapters. It comprises every speciality in the human body. Each chapter is written by a Specialist in his particular branch of medicine. These 30 authors are mostly young, fairly well-known men, many of whom hold teaching positions throughout the country. They not only explain how to make physical examinations, but they describe and interpret the pathological conditions that are to be encountered on examination. The diagrams, illustrations, and colored plates are excellent. This seems to be a book primarily for the student, but for the general practitioner, it is a reference book containing details and information presented in such concise style, that it should be of practical use on any medical man's book shelf. No book has ever been published which approaches the subjects of diagnosis and pathology as this does. Dr. Pullen and his contributors are to be commended on their contributions.

F. J. M.

HANDBOOK ON NUTRITION: A symposium prepared under the auspices of the Council on Foods and Nutrition of the American Medical Association. American Medical Association. Chicago. 1943. 586 pp. $2.50.

Twenty-eight authors have contributed to this symposium on nutrition to bring the knowledge in this field to an up-to-the-minute level for the benefit of students of nutrition and members of the medical profession for whose benefit the text was designed. The articles first appeared from time to time in the Journal of the American Medical Association.



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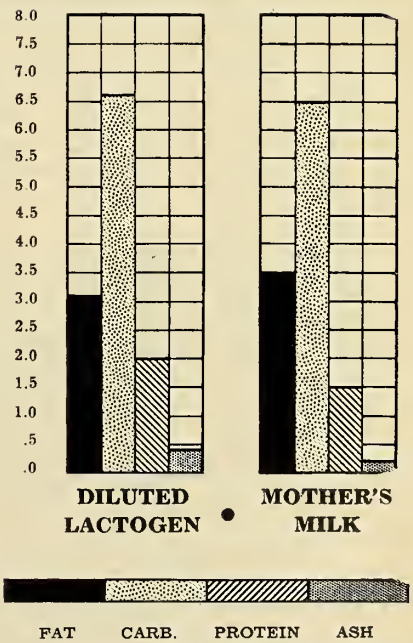
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JOHN LOVETT MORSE, *A.M., M.D.*
Clinical Pediatrics, p. 156



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Chapters on Proteins in Nutrition (Howard B. Lewis), Calories in Medical Practice (DuBois and Chambers), Water and Salt Requirements in Health and Disease (John H. Talbot), The Feeding of Healthy Infants and Children (Philip C. Jeans), Feeding the Aged (Edward L. Tuohy), Principles of Diet in the Treatment of Disease (Thos. D. Spies), and Improving the Quality of Cheap Staple Foods (George W. Cowgill) are among the 25 timely chapters the busy physician will find helpful in his desire to brush up on the latest findings in the field of nutrition as each contributor is a specialist in his field of discussion. Each chapter is comparatively brief, and the type plain and readable in spite of the number of pages. Of additional merit is the fact that each chapter includes a considerable bibliography so the student or physician may pursue his study or investigation further if he wishes. A table on Current Standards for Enrichment and Fortification of Foods is included. All in all, it is a handbook to be highly recommended. The price of the book is modest when both the format and content are considered.

K. C.

MINOR SURGERY: *Edited by Humphry Rolleston and Alan Moncrieff. Published by Philosophical Library, New York.

The entire field of minor surgery, including surgical specialties and anesthesia is presented in an orderly and well-planned manner in Minor Surgery.* The book is intended for the practitioner and this small volume should prove its worth as a refresher course for students, practitioners and specialists in surgery. It begins with a consideration of minor wounds. I cannot agree that minor wounds exist as the smallest wound presents a major problem and may result fatally. Also the last chapter on anesthesia and analysis causes a disagreement. The author's statement that with freshly prepared solutions of 10 per cent soluble hexobarbitone (evipan sidium), or 5 per cent sodium thiopentobarbital (pentothal sodium). "It is possible for one practitioner to make the injection and subsequently to perform the manipulation or operation." Both of these barbiturates are powerful and dangerous and should only be administered by an experienced anesthetist who can give all of his attention to the administration of the drug

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and the condition of the patient, then only can these drugs be considered fairly safe anesthetic agents.

E. P. P.

FUNCTIONAL DISORDERS OF THE FOOT: Their Diagnosis and Treatment, by Frank D. Dickson, M.D., F.A.D.S., Associate Professor of Clinical Surgery, Medical School, University of Kansas; Orthopedic Surgeon, St. Luke's Kansas City General and Wheatley Hospitals; and Rex L. Diveley, A.B., M.D., F.A.C.S., Colonel, Medical Corps, Army of the United States; Orthopedic Consultant, European Theater of Operations; Orthopediic Surgeon, St. Luke's, Kansas City General, Research and Wheatley Hospitals, Second Edition, 202 illustrations. J. B. Lippincott Co., E. Washington Square, Philadelphia. London. Montreal. 1944. $5.00.

This is an excellent book which is of particular interest to the orthopedist but should also be of value to the general surgeon or general practitioner who treats disorders of the foot. The book is lucid and arranged in such a manner as to make reference to special conditions readily accessible.

This edition has made some valuable additions to a previously well written and sound treatise on the foot. The addition of chapters dealing with functional disorders of the foot in relation to military service and the disorders in relation to industry are entirely new. In the former, the foot is classified into aeeeptable conditions and conditions which warrant rejection for military duty. This will be of value to those who are serving on Selective Service Examining Boards and likewise, the chapter on foot disorders to industry will be interesting to the industrial surgeon.

This volume can be highly recommended to those interested in the examination and treatment of the foot.

J. L-S.

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NEW BOOKS

BACKACHE AND SCIATIC NEURITIS, by Philip Lewin. 1943.

That complex mechanism—the back—is of equal interest to the orthopedic surgeon, gynecologist, urologist, obstetrician, neurologist, and roentgenologist. Here it is in all its complexities and by an authority!

RECONSTRUCTIVE SURGERY OF THE EYELIDS, by W. L. Hughes. 1943.

The title is self-explanatory—the subject is timely.

ORTHOPEDIC OPERATIONS, by A. Steindler, 1940.

The purpose of this book is to supply clear



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ACUTE INFECTIONS OF THE MEDIASTINUM, by H. Neuhof and E. E. Jemerin. 1943.
Mediastinal infections, so often regarded as strange lesions situated in a more or less inaccessible part of the body and characterized by high mortality, are approached and studied in a rational manner. The authors have charted a practical course that can be easily followed by any doctor encountering or suspecting mediastinitis.

CLINICAL NEUROLOGY, by I. S. Wechsler. Fifth Edition. 1943.
"The brief period of four years since the last edition appeared witnessed a number of advances in neurology: Chemotherapy of meningitis is practically new; headache is better understood; and electroencephalography, 'degenerative' diseases, and the automatic nervous system, all have received further study."

ORAL AND FACIAL DISEASES AND MALFORMATIONS, by G. V. I. Brown. Fourth Edition. 1938.
Plastic reconstructive surgery has come to be an important part of surgical practice. The general practitioner must be informed as to the possibilities of improving or correcting disfiguring scars, burn contractions, etc. Here is a text which offers a safe guide to the diagnosis and treatment of such conditions. Profusely illustrated.

APPLIED ANATOMY OF THE HEAD AND NECK—for practitioners of dentistry, by H. H. Shapiro. 1943.
This text is specifically designed to relate the anatomy of the head and neck to the various fields of dentistry. The anatomic detail selected for description has been confined to those features which are of the most significance in diagnosis and treatment.

INTERNAL MEDICINE IN DENTAL PRACTICE, by B. I. Comroe, L. H. Collins and M. P. Crane. Second Edition. 1943.
So often it is the dentist who first has the opportunity to observe manifestations of systemic disease! The authors feel that for this reason there should be closer cooperation and understanding between the internist and dentist. And so—a book—which points out the oral manifestations to the dentist in a clear, concise manner.

CLINICAL PARASITOLOGY, by C. F. Craig and E. C. Faust. Third Edition. 1943.
Here they are—those parasites which provide such clinical and public health problems! The symptoms caused by their presence and the important methods of diagno-

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sis, treatment and control are clearly described.

GERIATRIC MEDICINE; diagnosis and management of disease in the aging edited by E. J. Stieglitz. 1943.
The authors feel that during the next fifty years physicians will be called upon to treat relatively larger numbers of cases of cardiovascular renal diseases, cancer, diabetes, serious injuries that result from falls of the aged, and of senile psychoses; but relatively fewer cases of tuberculosis, syphilis, typhoid fever, malaria, other acute infections processes, and of diseases due to dietary insufficiencies. The medical profession should prepare itself for this important change in the pattern of its activities. Here is the text with which to begin such a preparation.

COLLEGE OF SURGEONS

The Ninth Annual Assembly of the International College of Surgeons will be held on October 3, 4, 5, 1944 at the Benjamin Franklin Hotel in Philadelphia, Pa. The program will be devoted to War, Rehabilitation and Civilian Surgery.

This Assembly, sponsored by the United States Chapter of which Thomas A. Shallow, M.D., F.A.C.S., F.I.C.S., of Philadelphia is President, has set up its Arrangement Committee with Dr. Rudolph Jaeger as General Chairman. Dr. Jaeger will be inducted as the incoming President of the United States Chapter at the Convocation on Wednesday evening, October 4. The new president came to the Jefferson Medical College from Denver, Colo., where he specialized in Neurosurgery.

Eminent surgeons in Government, Military and Civilian practice have been invited to attend and present papers pertinent to surgery in their particular field of endeavor.

The Chairmen of the various committees are: Dr. William Bates, President-elect of the Pennsylvania Medical Society, is chairman of the Program Committee; Dr. John Royal Moore, Philadelphia, Exhibits; Dr. Moses Behrend, Philadelphia, Hospital Clinics; Dr. William L. Martin, Philadelphia, Registration; Dr. Ernest F. Purcell, Trenton, N. J., Convocation; Dr. John E. Loftus, Philadelphia, Entertainment; Dr. Harold D. Corbusier, Planifield, N. J., Rehabilitation; Dr. Benjamin Shuster. Philadelphia, Housing; Dr. William F. Whelan, Motion Pictures. The medical profession is invited to attend the Assembly and its sessions.

TANTALUM AVAILABLE FOR CIVILIANS

Tantalum plates, foil, screws and wire to repair broken bones, nerves and skulls will shortly be available to civilian surgeons through a recent allocation of the War Production Board, according to an announcement made by Dr. Gustav S. Mathey, President of the Johnson & Johnson Research Foundation, New Brunswick, New Jersey.

The Johnson & Johnson Research Foundation is a non-profit organization, founded in 1940 to endow research in universities and hospitals and to disseminate summaries of findings to members of the medical profession. Dr. Mathey states that by an agreement between the Ethicon Suture Laboratories, Johnson & Johnson subsidiary, and the Fansteel Metallurgical Corporation of North Chicago, the availability of tantalum for civilian surgeons is assured at an early date.

Tantalum has assisted surgeons to return to active life many cases which in the last war would have been disfigured and incapacitated for life. Lost portions of the skull, ears, noses and other parts of the face are being replaced with tantalum. One veteran has a tantalum "belly wall". Nerves which control motion in arms and legs are stitched with tantalum thread and protected while healing with tantalum cuffs. Facial paralysis is relieved by small, saddle-shaped pieces of tantalum and wire used to pull the corners of the mouth to a normal position. This stops the unpleasant drooling and facial distortion which go with the condition. Cleft palates also are being corrected.

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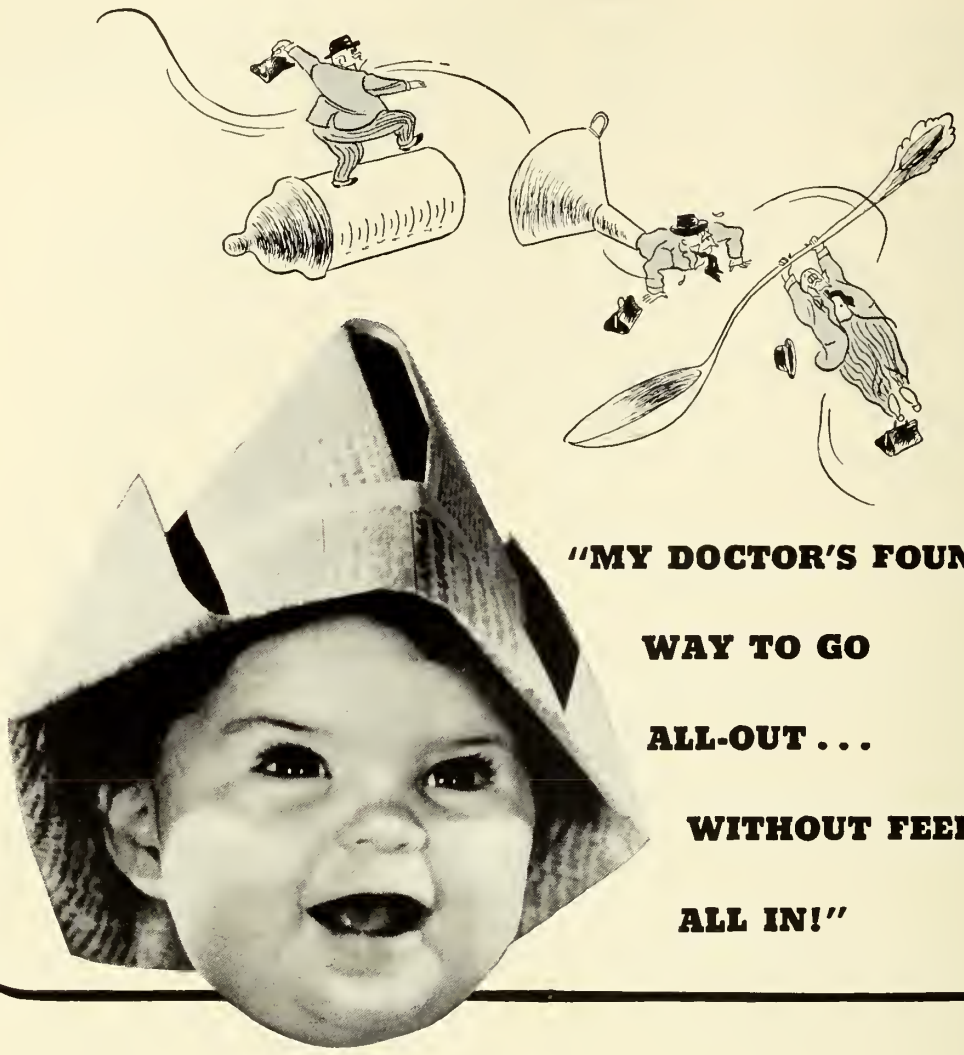
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Volume 1 *September, 1944* *Number 5*



"MY DOCTOR'S FOUND A WAY TO GO ALL-OUT . . . WITHOUT FEELING ALL IN!"

"MY DOCTOR certainly hated figuring and re-figuring proportions of milk, carbohydrates, water for feeding formulas.

"Then he looked into S-M-A. And I was on S-M-A—as soon as he saw what a dependable way it was to shortcut that old arithmetic. In only two minutes he explained to my Mummy how to mix and feed my S-M-A.

"*He knows that in S-M-A I'm getting an infant food that closely resembles breast milk in digestibility and nutritional completeness.*

"Since my doctor put me on S-M-A I'm happy, strong 'n' growin'. Mummy's happy 'cause *I'm* happy, and feeding's easier for her. And Doctor's happy—'cause he can lick his extra wartime work without feeling all in.

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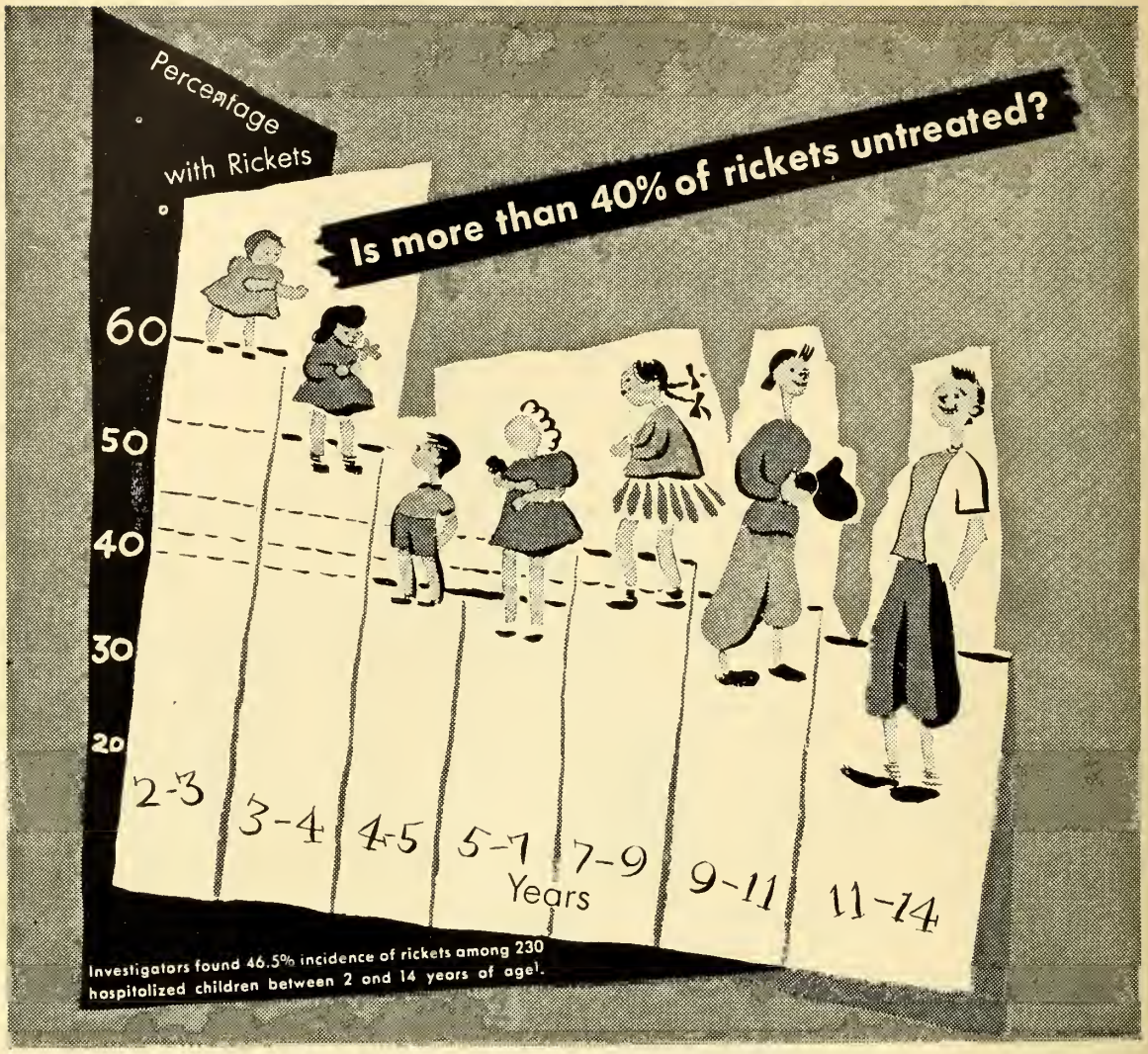
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Whether the vitamin supplements prescribed are far infants or far alder children, Upjahn preparatians may be given rautinely with the assurance af dependable patency in pleasant, easy-to-take dosage forms.

1. Follis, R. H.; Jackson, D.; Eliot, M. M., and Park, E. A.: Am. Jrl. Dis. Child. 66:1 (July) 1943. Note: A reprint of this paper is being mailed to all physicians. Additional copies are available upon request.

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ARIZONA MEDICINE
Published bi-monthly by Arizona Medical Association at 142 South Central Avenue, Phoenix, Arizona. Subscription $1.25 per year; single copy 25 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, act of March 3, 1879.

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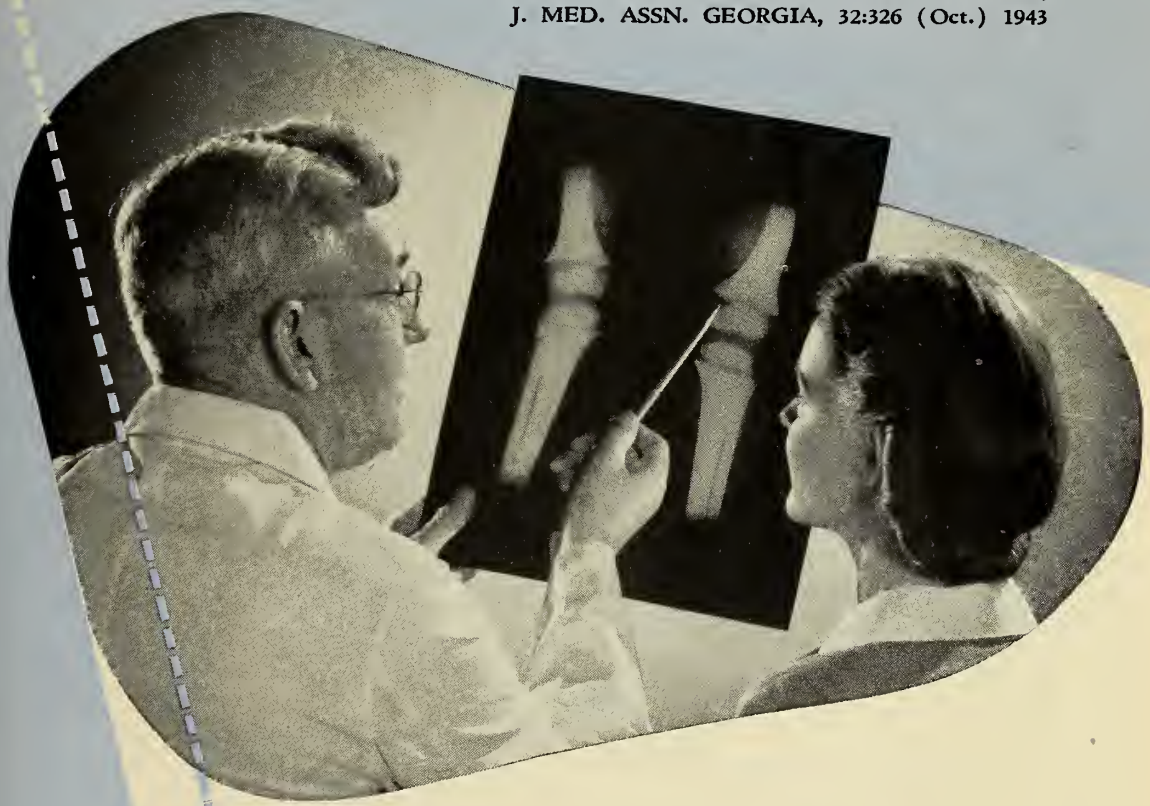
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WATSON, E. R.: SYMPOSIUM ON NUTRITION,
J. MED. ASSN. GEORGIA, 32:326 (Oct.) 1943



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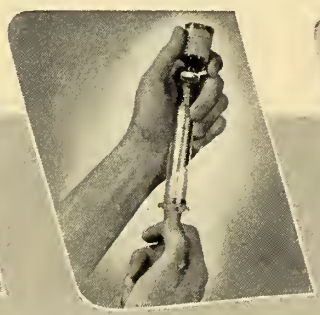
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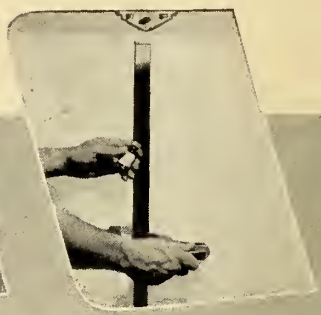
The convenience of the vial will be readily appreciated. After removal of the tear-off portion of the aluminum seal, sterilize the exposed surface of the rubber stopper



For the usual concentration (5000 Oxford Units per cc.) inject 20 cc. of physiologic salt solution into the vial in the usual aseptic procedure.



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in the customary manner, inject into the vial 20 cc. of pyrogen-free, sterile physiologic salt solution; without removing the needle invert vial and withdraw as many cc. of this 5000 units per cc. solution for the injection that is to be made immediately; store the vial with its remaining solution in the refrigerator—it is ready for use when the next injection is to be made.

The concentration withdrawn from the vial is 5000 units per cc. If a lower concentration is desired, modification is easily accomplished.

If you have not as yet received a copy of the "Penicillin-C.S.C. Therapeutic Reference Table," showing dosages, modes of administration, and duration of treatment required in the various infections in which penicillin is indicated, write for a complimentary copy now. You will find it a valuable aid in familiarizing yourself with penicillin therapy.

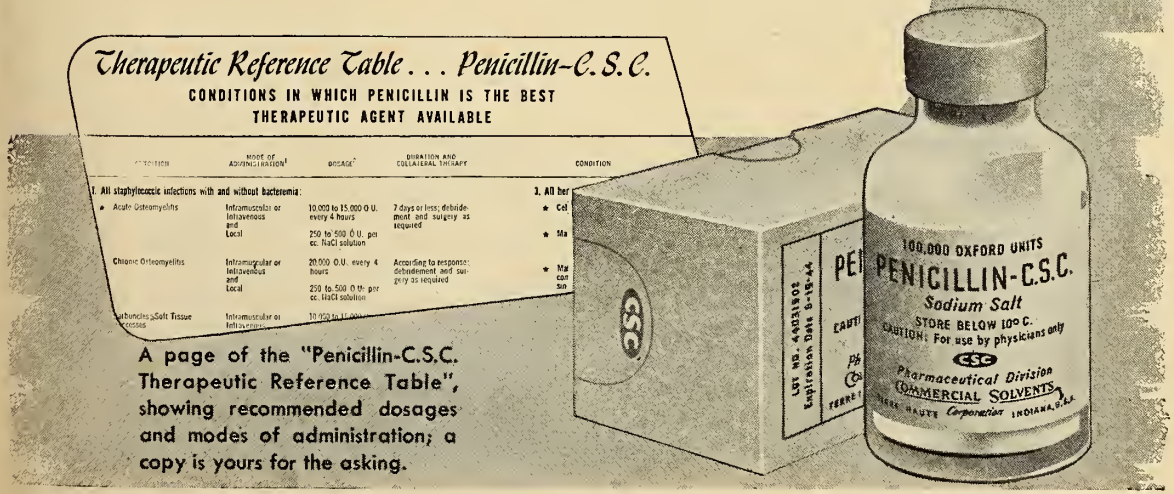
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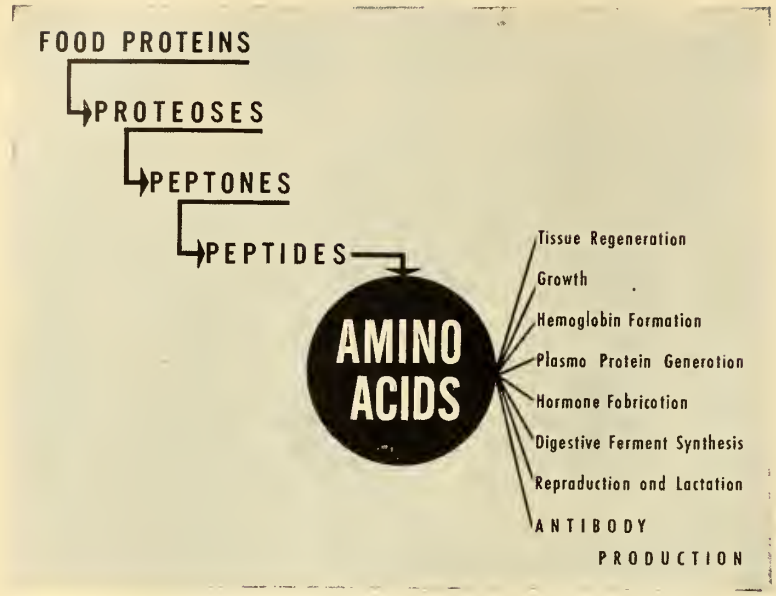
THE COMMON COLD . . . it *mixes* with the crowds, and it *meddles* to an extent which has meant as many as 23,000,000 persons ill with colds during a single week.[1] A review of the "sick list" in American shops and offices reveals other startling figures on the anti-production menace of the common cold. For instance, a reliable survey[2] shows that, in one winter month, thousands of workers were affected, with a resulting loss of 1,600,000 man-days of labor. In summary: Three out of four are attacked in winter . . . one out of twenty, even in midsummer. Immunologic responses to the so-called cold virus are relatively transient. Prophylactic indications, therefore, are directed toward active immunization against bacteria associated with the more severe types of common cold.

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1. Ending February 24, 1942. 2. November 24-December 20, 1941. American Institute of Public Opinion.

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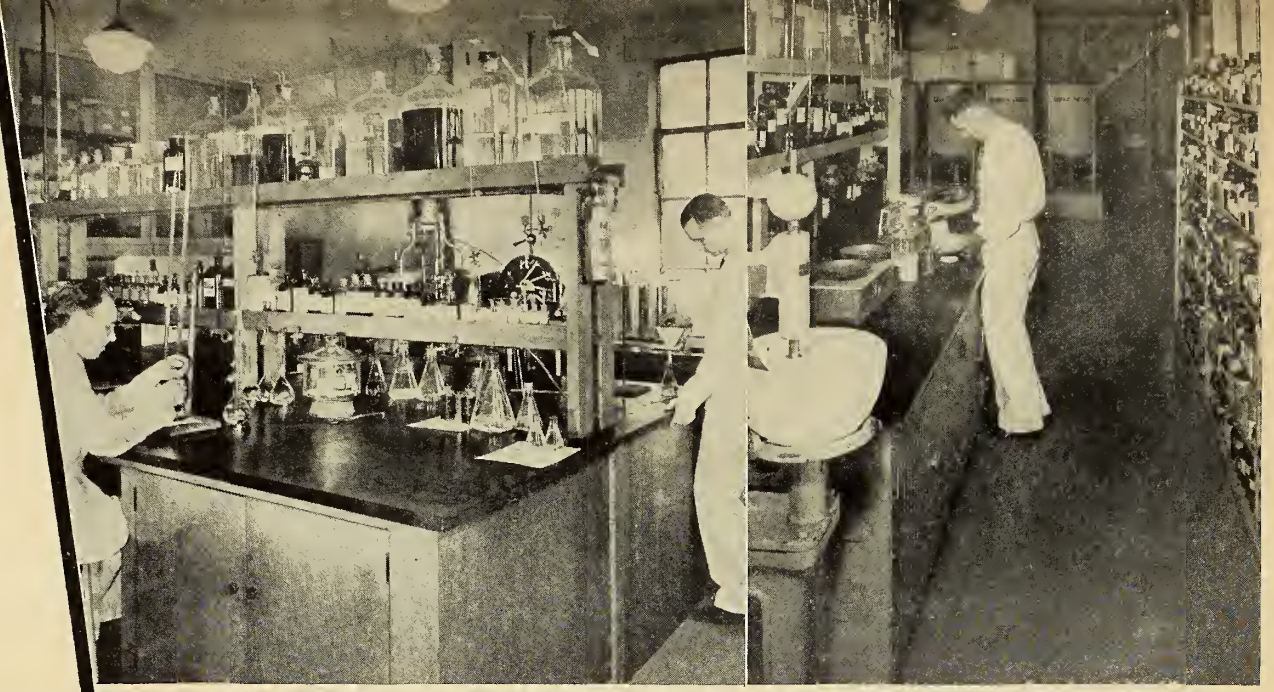
*"It is evident, therefore, that antibody production is but a phase of protein metabolism and that a protein deficiency, whether due to an inadequate protein intake, to protein loss, or to defective protein metabolism, must, in time, impair the maturation or preservation of the antibody mechanism. . . . This means, in turn, that food may play a decisive part in infectious processes in which antibody fabrication is desirable." Cannon, Paul R.: Protein Metabolism and Acquired Immunity, J. Am. Dietet. A. 20:77 (Feb.)1944.

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PRIMARY CARCINOMA OF FALLOPIAN TUBE

MAURICE ROSENTHAL, M. D. and KENNETH PETERSON, M. D.
From the Laboratory of Good Samaritan Hospital
Phoenix, Arizona

STUDY of the literature reveals that primary carcinoma of the fallopian tube is a comparatively rare lesion. In 1927, Barrows found only three primary cancers of the fallopian tube in 30,000 gynecological cases in Bellèview Hospital in New York City. Wharton and Krock, in 1929, found only five cases in 35,000 gynecological patients in the Johns Hopkins Hospital. There is a discrepancy in the literature concerning the first authentic description of this condition. Ewing attributes the first description of primary carcinoma of the fallopian tube to Orthmann, in 1886. Nürnberger, in 1932, collected 301 cases covering the period from 1886 to 1931, and ascribed priority to Orthmann (1886). In 1935, Robinson, who reviewed the literature and reported three additional cases, stated that primary carcinoma of the fallopian tube was recorded for the first time by Reynard in 1847, and the first pathological description was rendered by Rokitansky in 1861.

There also seems to be a discrepancy as to the number of authentic cases reported. Ewing, in his Fourth Edition of "Neoplastic Diseases", states that about 120 cases had been reported since Orthmann's original description. In 1935, Robinson reviewed the literature, and recorded 349 cases. Novak, in his 1941 edition of "Text on Gynecological and Obstetrical Pathology", states: "There are approximately 300 cases to be found in the literature". Let it suffice to say that primary carcinoma of the fallopian tube has been recognized and recorded for many years, and that it is a comparatively rare finding.

The literature further reveals that it occurs most frequently during the fourth and fifth decades. However, it has been encountered as early as the second, and late as the eighth decade. It is usually a unilateral lesion, although one-third of the cases showed a bilateral involvement.

The symptoms and signs are not characteristic, although in a number of cases a low abdominal pain, with yellow watery or bloody vaginal discharges were noted. The pain is colicky and intermittent in character, and is sometimes relieved as a sudden gush of watery yellow or bloody fluid is expelled from the vagina. Latzko thought that the colicky, intermittent pains were due to an exaggerated peristalsis of the tubes in an effort to expel the contents. Stanca felt that as a result of degeneration and necrosis the tubal contents may become fluid or semi-diffluent, and the fallopian tube attempts to expel this material into the uterus and vagina.

Physical examination of the pelvis is of little help in establishing a preoperative diagnosis, since it only reveals a mass, which may closely simulate any variety of pathologic changes in the fallopian tube. Furthermore, the diagnosis at the operating table is difficult to establish, as the tube is frequently enormously enlarged, and gives the impression of a pyosalpinx or hydrosalpinx. This is especially true, if it is associated with an intra-ligamentary or ovarian pathologic change. The external surface of the tube is smooth, and may present a purplish-blue discoloration.

Ewing states that the prognosis of tubal carcinoma is no better than cervical carcinoma, and after infiltration of the wall it is definitely unfavorable. Novak is also of the opinion that primary carcinoma of the tube is highly malignant, and found only a few reported cases which survived five years after operation. In 1926, Wechsler found only six 3-year survivals in 200 reported cases, according to Wharton.

CASE HISTORY

The patient, a 45-year-old female, was admitted to the hospital following a periodic physical examination. Although she had lost 19 pounds in 9 months, the patient had no complaints, simply wishing an examination prior to returning to work.

The physical examination was essentially negative, except for a pelvic mass noted on the left side. Her past history was essentially negative. She had had no operations.

Her family history revealed that her moth-

er was living and well. Her father died at the age of 52, of heart disease. Her husband had pulmonary tuberculosis.

The patient started menstruating at 13 years of age, and was always regular. She had no miscarriages or abortions, and had been pregnant three times. She first became pregnant at 18 years of age, and again at 20 years of age, giving birth each time to a normal, full-term infant, with no difficulty. At 27 years of age she gave birth to full-term twins, both of whom died several hours after an apparently normal delivery. She did not know the cause of death.

The patient insisted that she never had any pain, and was merely undergoing a preliminary physical examination in anticipation of accepting work at a war plant.

At operation, an enlarged tube which resembled a pyosalpinx grossly was found. This tube, the other fallopian tube, with a small fibrous ovary, and the appendix were removed.

The gross pathologic description was as follows:

"The fallopian tube was markedly enlarged and distorted in shape. The tube was shaped somewhat like a retort. The external surface was quite smooth, and the fimbriated portion of the tube was completely obliterated. At this extremity the tube presented a large, nodular, cystic swelling. Upon opening the tube, the entire lumen was filled with a friable, grayish, granularlike mass of tissue divided by fine septa. The tubal wall appeared to be normal in thickness—in fact, in some areas it was thinner than usual. Upon sectioning the remainder of the tube it was also filled with a similar friable, grayish material which was hemorrhagic in some places. The other tube showed no gross changes of pathologic significance.
The ovary was small, oval in shape, and fibrous in appearance. It measured 1 x 2 cm.
The appendix showed no gross changes of pathologic significance."

(However, microscopic examination revealed an acute inflammatory process of the appendix.)

Microscopic study of the enlarged fallopian tube revealed that the gray, bulky, friable mass described in the gross was comprised of large round epithelial cells arranged in an alveolar and papillary pattern. The stroma was scant, but moderately vascular, and was infiltrated by a moderate number of lymphocytes and plasma cells. The papillae or the papillary folds showed a hyperplasia of the lining epithelial cells, possessing hyperchromatic nuclei and mitotic figures. There was only a slight tendency of the neoplasm to grow into the muscular wall, as only a few small gland spaces could be found in the sections studied. The fibromuscular coat in some areas showed atrophy of the muscular elements.

DISCUSSION

It is an interesting observation that primary carcinoma of the fallopian tube occurs so infrequently in contrast to the rather common occurrence of malignancy in other parts of the internal genital organs. This is especially interesting since the uterus, which is one of the commonest sites of malignancy, arises from the same embryonic structure — the muellerian ducts. Furthermore, there is a direct continuity between the uterus and the fallopian tube. However, as one examines the difference in histologic structure of the uterus and fallopian tube, one observes a difference in the function and structure, which may account for the frequency of malignancy in the uterus. In the uterus one finds three types of epithelium, in the endometrium, the cervical canal, and the surface of the external os; whereas in the tube the epithelium is uniform in structure and apparently only reacts slightly to hormonal stimulation produced by the ovary. In the uterus, the epithelium responds by hyperplasia, hypertrophy or atrophy to hormonal stimulation. While the fallopian tube has a simple function—merely that of transmitting the ovum to the uterus—the uterus has many functions, and is constantly undergoing various structural changes. Furthermore, the cervix and uterus are frequently exposed to traumatic and chronic irritations. This is especially true of the cervix. For example, repeated pregnancies may cause cervical tears, and other trauma of the cervical tissue. The fallopian tube, being in the pelvis, is protected from trauma. It is frequently irritated by infection, although not as frequently as the cervix. Since trauma and chronic irritation are usually accepted etiological factors in malignancy, it is therefore not unusual to find malignant changes in the more frequently traumatized and chronically irritated portion of the internal genital organs.

The tumors arise from the mucosa of the tube, which may produce a papillo-alveolar or solid architectural pattern. The tumor mass tends to grow into the lumen of the tube, and the wall of the tube usually remains thin. This is in contrast to metastatic carcinoma to the fallopian tube, in which the tumor often arises in the wall of the tube, producing a thick wall.

Secondary infection may occur, producing degeneration and necrosis of the tumor cells. The malignancy may spread into the peritoneal cavity by way of the open fimbriated end of the tube, producing peritoneal implantations with ascites and diffuse carcinomatosis. Occasionally, it spreads by direct invasion through the wall of the tube into the mesosalpinx, and thus may involve the ovary, intestine, or uterus. Metastasis by way of the lymphatics to distant lymph glands may occur.

REFERENCES

Wharton L. R., and Krock F. H.: Primary Carcinoma of the Fallopian Tubes. A series of 14 cases. Arch. Surg. 19:848-870 (Nov.) 1929.

Ewing, James: Neoplastic Diseases, 4th Edition, 1941.

Robinson, M. R.: A.M.A. Journal of Obstetrics & Gynecology, Volume 32, page 84, 1936.

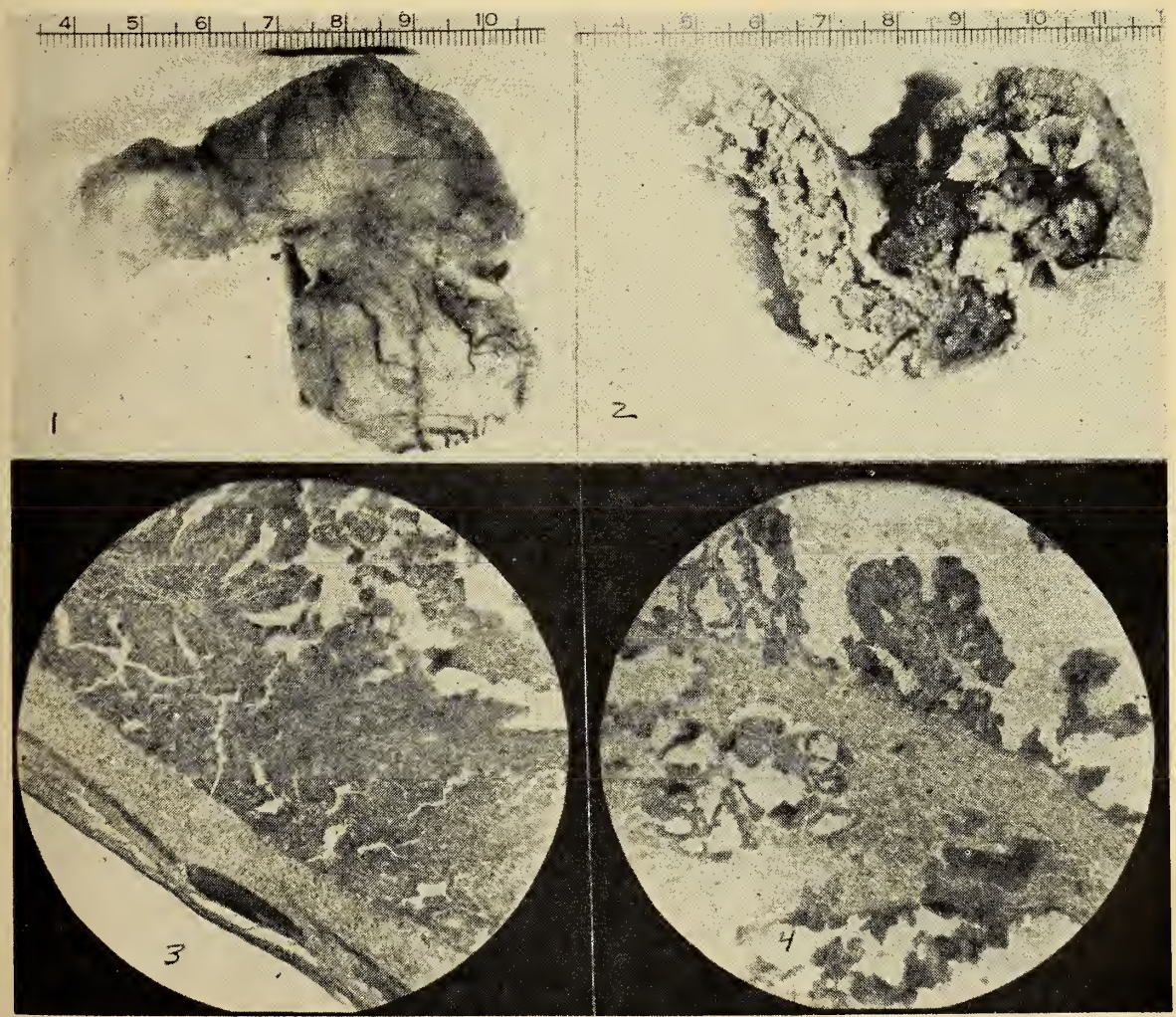
Nurnberger, L.: Veit Stoechel Handbuch der Gynakologie 7:729, 1895.

Novak, Emil: Gynecological and Obstetrical Pathology Text, 1940.

Latzko: Geburtsh. Gynak. Ges. Wien. Ref. zbl. f. Gynak 41:5349, 1915.

Stanca: Zentrabl. f. Gynak, p. 508, 1922.

Wharton, L. R.: Gynecology Including Female Urology Text, 1943.



1. Note the smooth external surface of the tube, and the resemblance to a pyosalpinx.
2. Cut surface of tube showing lumen filled with a grayish, granular tumor mass.
3. Note the papillary variety of carcinoma growing from the thin wall of the tube.
4. Large tree-like papillae growing toward the center of the lumen.

THE BIOCHEMICAL APPROACH TO MODERN SURGICAL METHODS

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IN the treatment of many surgical conditions, we have witnessed the evolution of the education of a surgeon from that of the skilled anatomist to the combined and much preferred moderately well versed anatomist, and excellent surgical pathologist. In order to treat scientifically and with reason many surgical afflictions, the surgeon must incorporate into his working armamentarium a thorough knowledge of biochemistry as it is related to the allied specialties, and have the worthy attributes of his predecessors by being skilled in anatomy, physiology, and surgical pathology.

Recently developed surgeons have passed through a very much troubled and chaotic intern year with perhaps two or three more years of residence in some line of special surgical endeavor. A great deal of their daily work in the hospitals appeared to be just so much routine with little apparent reason for it at times. On the surgical wards, often they have anticipated and executed the attending surgeon's order, "Give her some fluids—that will fix her up," little realizing that the unwise administration of fluids as well as the dissipation of fluids and secretions was fraught with grave dangers. All of us have witnessed in the days of popular gastro-jejunostomies for peptic ulcer, the cases that suddenly turned for the worse on the eighth or tenth day of an uneventful convalescence after a perfectly executed technical job. The unsuspected late and fatal complications were usually followed by reopening the abdomen after thorough supersaturation of the patient with Nacl clyses, thereby adding further insult to a disordered G. I. tract, made so by a faulty electrolyte balance, and a distortion of serum protein levels altering the colloid osmotic pressure of the blood. By doing an anterior gastro-enterostomy, a procedure frequently performed, and by making a larger stoma with more strangulated tissue, resulting in greater suture edema, and the further supersaturation of the patient with Nacl and with no thought of the protein carbohydrate and mineral balance necessary for maintaining colloid osmotic pressure of the blood, the patient remained inexplicably ill. The vicious circle increased, and we proposed suction as an adjuvant further depleting Cl ions leading to alkalosis. The edema around the newly made suture line often became worse with protracted vomiting. As an adjunct to such surgical therapeusis, surgeons resorted finally to jejunal feeding with all descriptions of peptonized solutions and in some instances a happy outcome supervened. To the less fortunate who died, there was little to explain the cause of death other than on mechanical grounds.

Little thought was given to the restoration of the plasma colloid pressure of the blood by the use of transfusion, of lyophlized serum, plasma amino acids, peptone hydrolysate and hypertonic solutions.

Procedures producing tissue edemas were ironically and persistently adhered to as acceptable therapy with an occasional blood transfusion to change the order of things. It is now a known fact that blood transfusion only temporarily restores circulating blood proteins to normal, after which the blood protein levels revert again to their former lowered state. Elman of St. Louis has demonstrated in his research that parenteral restoration of protein is alone insufficient; in that the mechanism for protein regeneration must be reactivated to restore permanently the serum protein level of the blood and prevent the disastrous train of symptoms resulting from protein depletion.

The factors producing tissue edemas after vigorous unphysiological Nacl administration produce the late and latent suture line edemas and cause breaking-through of suture lines, leaking, and resultant fatal peritonitis often wrongly attributed to soiling at the time of operation.

The problem of water intoxication of the

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(The thoughts expressed in this article are not to be construed as the policy of the armed forces but are strictly the private opinion of the author.)

surgical patient has been studied. Through painstaking efforts of Coller, Maddock, et al, who called attention to *water loss, water storage,* insensible water loss, and the fluid requirements of the "genus homo." Without this knowledge, many types of elective and emergency gastro-intestinal surgery would eventuate unnecessarily in a surgical mortality.

By placing the fluid requirements of man upon a scientific basis we are now able to gauge more accurately first and subsequent p. o. days' fluids requirements in "CC's" and to prevent such extreme states of either hyperhydration to the point of intoxication and its converse dehydration with its attendant acidotic features and extremes of tissue dessication.

As embryonic surgeons, we have heard "the chief" say, "Give her five thousand today; she has peritonitis—we must wash those poisons out through the kidneys and skin." Often, we found, to our chagrin, that as quickly as the fluids were *poured* into the circulation by venoclysis at a rate usually far too rapid for absorption, that these—with other threshold substances—were found in the jar along the side of the bed in a far larger amount than the original clinical order called for. This further augmented abdominal distension, decreasing urinary output, increasing nitrogen retention, increasing the already existent edema of visceral organs, and the loss of precious crystalloids so necessary for the maintenance of blood neutrality (P. H.).

The syndrome of hypochloremia is well established now, such as occurs in pyloric obstruction, fistulae, diarrheal states, and the like. The role that Nacl plays in certain so-called deficient glandular states as hypoadrenalinism and Addison disease must likewise be reckoned with in many postoperative surgical conditions. The relation of the cortical portion of the adrenal to the shock syndrome has given us an added avenue of approach to the treatment of shock.

Before Virgil Moon's investigations on shock, the etiological differences in the mechanism producing the shock syndrome as caused by hemorrhage, or by the release of histamine-like substances causing vasomotor paresis, or the shock supervening upon acute trauma were unappraised. It is gratifying to know that serial hemoglobin determinations reveal as much information about the state of shock, its course and prognosis, as do serial blood pressure determinations with the usual clinical admonition following to give more fluids that readily filtered out of the circulation along with such stimulants, which, because of their central action, had no therapeutic effect upon the stasis of blood in the splanchnic cesspool and the peripheral vascular bed—namely, the vast capillary and arteriolar bed.

The classification of shock has led to a more concise, scientific and workable understanding of its therapy, and has extended therapeusis to the use of cortical extracts (hormonotherapy) and the use of crystalloids of proper molar concentrations, and blood plasma when indicated, and such peripheral vasomotor stimulants that have a direct action upon the blood vessels maintaining vasomotor tone, and the vasomotor center in the medulla.

The physiology of shock is slowly being completed due to the work of Scudder, Moon, Blaloch, and a host of unsung physiologists. It certainly is clinically worthwhile to know whether the causative factor producing shock is due to loss of fluids, toxic absorption from a burned surface with its associated histamine-like action, trauma, or perhaps violent hemorrhage. The therapy of shock suggests itself to the careful clinician for it would be worthless to transfuse in a case where an already pathological polycythemia and lowered plasma volume of the blood existed. Likewise, it would be stupid to give isotonic solutions to the patient shocked from hemorrhage without the preliminary blood transfusion; or administration of acacia or plasma; or, as I have witnessed many a time, the giving of central stimulants such as digitalis, coramine, strophanthus when peripheral vasomotor collapse and anteriolar stasis existed.

I have seen, as have others, the use of fluids, morphine, and the administration of intravenous infusions abused to such an extent that I feel that every one qualified in surgery should be versed in the biochemical reasoning for the use of these substances with some scientific accuracy. An internist of good repute would no longer think of controlling diabetes without accurate quantitative and qualitative urine and blood determination. A surgeon,

however, will blithely disturb the water, electrolyte, and vitamin balance, and necessary blood protein levels to such an extent to literally shock the entire biochemical and biophysical makeup of the patient and continue upon his way after doing acceptable mechanical work. I know that it is possible in every surgeon's experience to cite cases of water intoxication, hypochloraemia, gastro-intestinal atonies and the like that righted themselves either because of the surgeon's aloofness or ignorance of what to do, or because of that grand stabilizing force and biological reserve of mother nature in the face of odds with the constant desire to right the wrongs of our well meant unphysiological endeavors.

The true understanding of the biochemical aspects of high intestinal obstruction with the significant diminution in the plasma chloride concentration and its attendant alteration in electrolyte distribution and acid base balance has saved many a patient from doom. Prolonged losses of gastric juices, bile, jejunal and ileal fluids through vomiting, diarrhea, or external fistulae result in depletion of blood chlorides and resultant hypochloraemia. The actual chloride loss in these conditions is masked by the associated states of dehydration and tissue dessication such that the true index of chloride requirement of the body is often masked by plasma chloride concentration determination.[7]

In hypertrophic pyloric stenosis of infants and the stenosing duodenal ulcer of adults, chloride depletion is usually in excess of Na loss. The loss of chloride from the blood plasma results in the accumulation of HCO_3 and if protracted, plasma sodium is depleted by its excessive elimination in the urine in an attempt on the part of the body to maintain blood neutrality (ph) and prevent the development of a masked alkalosis.[7]

Today we think in terms of alkalosis and its attendant symptoms. Alkalosis due to primary alkali excess is one of the most constant metabolic features of upper intestinal obstruction together with hypochloraemia, and nitrogen retention. As a result of the loss of the Cl ion from the blood there is present in the blood an excess of base chiefly Na and K retained in the form of HCO_3. A point worthy of mention is that ketosis can occur in the presence of alkalosis as well as acidosis. Ketosis develops as the result of CHO starvation, but the acidifying effect of the ketone acids is insufficient to counterbalance the excessive HCO_3 accumulation resulting directly from the depletion of the chloride ions. When adequate Na, Cl, and H_2O are administered, the correct degree of retention and excretion of the Na and Cl ions necessary to reestablish the normal acid base equilibrium depends upon kidney function and plasma protein levels. The ketone acids are corrected by glucose administration and insulin in proper dosage.

Scudder, Zweemer, and Whipple[7] in an evaluation of 2150 cases of intestinal obstruction revealed K to be the toxic factor.[6] The Mayo group in their research reveal the associated great losses of Na, Ca, and K in refutation of Scudder's work. We now have the solution containing the bases of K and Ca (Ringer's Solution) added to saline and dextrose. Falcmer, Osterberg, and Bargen have demonstrated that high cholesterol values in high intestinal obstruction are usually of serious import.[2] More recently high value for K were found in intestinal obstruction—values as high as · mg./100 in clinical and experimental obstruction. The increase was said to be due to the absorption of K from contents of obstructed bowel; others attributed it to adrenal cortical insufficiency.[5]

That certain of the inorganic constituents of the blood serum exist in ratios that can be determined clinically was brought out by Ellen S. Flurey[3] of the Mayo Clinic who determined that the mean value for total protein was 7.4 gm per one hundred cc., for albumin 4.9 gm and for globulin 2.4 gm.[3] The mean albumen globulin ratio was 2.06, the mean value for sodium 332.5 mg., for K 19.1 mg., and total base 159.2 cc. of tenth normal sodium hydroxide per 100 cc of blood. It was further brought out in this study that there is no significant variation in the mean values of the various groups. That the probably variation of mean values varied only from .02 to 1.52 per cent lends itself to studies on cases in which significant deviations indicate disease; that the surgeon today is forced to use these adjuncts in physical diagnosis goes without saying; not to use them, very often determines a poor clinical result ending disastrously.

Interesting cases of spontaneous hypoglycemia and their amelioration by resection of the islet cells of the Pancreas have come to the attention of surgeons. Blood sugar determinations and sugar tolerance curves and the finding of islet cell tumors has led to courageous attacks upon the pancreas. Today it is found that there are certain cases of unusual spontaneous hypoglycemia which do not yield to the classical Whipple approach and resection. This is no more disconcerting a fact than the knowledge that diabetes mellitus is not solely a pancreatic disease due to deficiency, sclerosis or atrophy in the Islet cells of Langerhans. More interesting biochemical speculation that will ultimately lead to a greatly enlightened approach to the problems of hypoglycemia as occasioned by Islet cell tumors of the pancreas, and the more accurate control of insulin resistant diabetes will eventuate.

In the field of biliary surgery, the hazardous case of obstructive jaundice with its coexistent effects upon blood coagulability have been rendered safer for operative intervention by the use of Vitamin K. Doctors Butt, Snell, and Osterberg[1] have demonstrated that the administration of vitamin concentrates containing Vitamin K along with human bile or bile salts resulted in a decrease of the prothrombin time of the blood of patients having jaundice. Actual bleeding is said to be inhibited by the administration of these products. The true chemical composition of Vitamin K in pure form will soon be known, but it is definitely known that a deficiency of this accessory fat soluble substance produces a bleeding tendency. The exact nature of prothrombin is uncertain. It is thought to be a protein and for the present the qualitative method of Quick and his coworkers is best adapted for clinical usage.[4] Just as naval surgeons worked out Vitamin C, so will Vitamin K be worked out in pure form. This we know: the administration of this vitamin (1) decreases mortality in operation on the biliary tract of obstructive jaundice with prolonged bleeding time, (2) decreases the incidence of abnormal post operative bleeding, and the necessity for blood transfusion. Just as the surgical diabetic is treated by group effort, so the surgically jaundiced patient, with the one admonition that we must not be lulled into a sense of false security, but must use all means available today, plus the better way, and prevent the occurrence of bleeding and do not sub-judice refute some of the older tried methods.

Blood chemistry determinations are of particular value in the practice of internal medicine and surgery, and as such allow both the internist and surgeon to evaluate the patient as a surgical risk, thereby enabling the adoption of the best suited anesthetic agent to the surgical procedure after due preparation of the patient with regard to mineral, carbohydrate and vitamin balance, sugar storage in the liver, oxygen carrying capacity of the blood and its coagulability. Surgery is today no longer out of reach of the debilitated patient, and by the adequate use of biochemical studies, the one-time condemned patient can be restored to a state of operability by (13 augmenting kidney function, (2) increasing heart reserve, (3) restoring mineral and vitamin balance, and correcting blood, glandular, and vitamin deficiencies. Without the aid of the laboratory and biochemical methods, much of the preparation which a surgical case receives today would be lost in the quagmire of presupposition and unintelligent guessing. It is just as important to have the surgical paient in *mineral*, *water*, and *vitamin balance* as it to have the necessary amount of *sugar* and *protein* stored in the liver, as glycogen is to be used during anesthesia and convalescence. No less an instrument than the electrocardiograph often forestalls many a gall bladder operation by detecting organic disturbances of heart rhythm and heart muscle deficiencies that would go unrecognized by the usual methods of diagnosis. The relative acuteness, or chronicity of an inflammatory process is again appraised by the white blood count and differential studies, before surgery is attempted, such that the surgeon is somewhat informed of the fight the natural defenses are waging against an infection. An appraisal of the oxygen carrying capacity of the blood by routine hemoglobin determinations will often make a patient a better risk if blood transfusion is undertaken prior to surgery rather than after surgery. It is not only of scientific interest, but to the interest of the patient, to have some idea of the circulating proteins in the blood and the ratio in which these exist in the blood stream.

Only within the past few years has it been a known fact that deficiencies in the circulating blood proteins and in Vitamin C lead to disruption of wounds, delayed healing, and poor tissue regeneration. Only through biochemical studies have the surgeons avoided unnecessary waterlogging of the tissues after operation by their vigorous, well-meant attempts to support the circulation and restore elecrolytes, little realizing that sodium and chlorine exist in a definite proportion in the blood plasma and are there to maintain proper osmostic relationships between the blood and the surrounding tissues. Certain types of non-mechanical upper intestinal obstruction due to deficiencies of proteins in the blood are rapidly corrected by the administration of one of the most potent blood proteins—namely, the matched blood of a suitable donor.

It is a rare sight to see a patient almost moribund, waterlogged, sluggish and just not getting along, suddenly become bright, snappy and with appetite restored after the doctor orders meat for the patient, following the interdiction of salt. Simple as numerous of these observations of a similar nature may appear, all are sanely and scientifically proven, and without methods of precision such surgical work would come needlessly to a bitter end. The preparation of patients having a tendency to hemorrhage—with Vitamin K to augment blood coagulability—is striking in the cases of benign and malignant obstructive biliary disease. The preparation of these patients for safe surgical approach constitutes a problem for the combined efforts of the laboratory, internist, and surgeon. Here, through the use of Vitamin K, bile salts, glucose and protein, the coagulability of the blood is restored to normal; the small intestine digests fats better and the liver function is restored to a safer level of glycogen reserve. Thus, it is plain to see that surgeons of today must have graduated from the stage of "barbour surgeons" of the middle ages where only a skilled hand and stronger assistants were necessary to restrain a patient in the dorsal recumbent long enough for the surgeon to perform his work. Today, the surgeon must combine the services of anatomist, pathologist, and biochemist and craftsman who must work manually to aid nature in the physiological (biochemical) restoration of function to diseased organs.

BIBLIOGRAPHY

1. Butt Snell, Osterberg. Proceedings of Staff Meetings of Mayo Clinic. Vol. XIII, pp. 751-761.

2 Falconer, M. A., Osterberg, A. E., and Bargen, J. A. Serum Bases During Intestinal Obstruction. Staff Meetings of Mayo Clinic. Vol. XIV, No. II, pp. 22-27. January 11, 1939.

3. Flurey, Ellen D. Blood Bases and Proteins. Staff Meetings of Mayo Clinic. Vol. XIII. No. 46, p. 732, November 16, 1938.

4. Quick, A. J., Brown, S., Bancroft, F. W. and Margaret. Study of the Coagulation Defect in Hemophilia and Jaundice. Am. Journ. Med. Sciences. Vol. 190, pp. 501-511. Oct., 1933.

5. Scudder. Surgery, Vol. I, p. 74, 1932.

6. Scudder, Zweemer, and Whipple. Acute Intestinal Obstructions: Evaluation of Results in 2150 Cases with Detailed Studies Showing K as Toxic Factor. Ann. Surgery, 107:161-197, February, 1938.

7. Trumper and Cantarow. Biochemical Aspecs of True High Intestinal Obstruction. Clinical Biochemisry, pp. 202-203.

DIAGNOSIS WITH DIFFERENTIAL DIAGNOSIS OF SILICOSIS FROM OTHER CONDITIONS SIMULATING IT

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IT is generally recognized that silicosis often is a disease slowly developing over a period of years and that in its early stages there may be no clinical symptoms. Watkins-Pitchford found that on the average it required 9.6 years before the appearance of symptoms following exposure. Smith claims that silicosis can only be reliably diagnosed by x-ray of the chest. She found that in 25% of a group of cases whose x-rays showed unmistakable evidence of silicosis there were no symptoms whatsoever and that therefore symptoms, while significant when found, do not by any means indicate absence of silicosis by their absence. On the other hand the reverse may also be true for there are cases that develop cough and shortness of breath with only slight x-ray evidence of increase in the root shadows and on the accentuation of peribronchial markings as emphasized by Cooke.

The diagnosis of silicosis is not difficult in the advanced stages but it may be overlooked

in individuals who have not been exposed to dust for a period of years. Britton and Head cite four cases that were exposed to silica dust for from 4 months to 14 years without developing symptoms but that years later, after a prolonged interval in which they were unexposed to dust, developed symptoms and x-ray evidence of silicosis. From these cases it is seen that the lung changes may, and often do, continue long after the inhalation of dust has been discontinued, and therefore makes it important to obtain a careful occupational history in all cases in which the symptoms and x-ray findings suggest the possibility of silicosis.

There is an acute form of silicosis reported by Kilgore which is often overlooked and may be difficult to diagnose unless it is kept in mind. He cites 6 cases that were exposed to silica for from 10 to 16 months who developed acute symptoms of dyspnea and cough. A few also had chest pain and hemoptysis. An erroneous diagnosis was made in a few of these cases because of the rapid fatal outcome of their disease. All of these cases were in the same industry—the manufacture of scouring powder for domestic use. It is probable that the accelerated course of the silicosis in these cases was due to the combined inhalation of alkali or soap, or both, with quartz dust and that the mixture greatly increases the harmful effect of the silica.

Except for these two rather uncommon types of silicosis, the one in which the disease progresses long after exposure has ceased and the other acute form occuring in the scouring powder and soap industry, silicosis commonly runs a uniform course which, for matter of convenience, has been divided into three stages. The committee on Pneumonoconiosis of the Industrial Hygiene Section of the American Public Health Association has given the following statement in regard to the stages of the disease:

"First stage: (Corresponding to ante-primary stage of South Africa) The symptoms of uncomplicated first-stage silicosis are few and often indefinite. The man may apparently be quite well and his working capacity not noticeably impaired. Slight shortness of breath on exertion and some unproductive cough often with recurrent colds, are the most usual symptoms. The man may have a little less ability to expand his chest than formerly, and the elasticity of the chest may be slightly impaired. The earliest specific indication of the presence of silicosis is the radiographic appearance consisting of generalized arborization throughout both lung fields with more or less small, discrete mottling."

Sayers states that no nationality is exempt from the disease and that all races are susceptible, and that age in itself is probably no great factor in the prevalence of the disease. Irvine claims that 0.83 per cent of miners in South Africa had silicosis at 30 to 35 years of age, 2.61 per cent at 34 to 37 years, 3.77 per cent at 42 to 45 years, and 3.5 per cent at over 46 years. On the other hand, in other reports the incidence has been much higher but there is a general agreement that the incidence rises with advancing years because of the increased length of exposure to the silica dust. It has been further systematically noted in all extensive reports of the disease that shortness of breath to a greater or less degree is a cardinal symptom of the first stage of silicosis. Irvine states that there is some amount of irritating cough, typically a deep cough with little or no expectoration often worst in the morning and sometimes inducing vomiting. According to Irvine, it is the belief of the investigators in South Africa that "it remains true to say that we should not think of 'simple' silicosis merely as a dust fibrosis but as being, at least in many cases, a dust fibrosis which from its beginning as a clinically detectable condition is linked up with an element of latent tuberculous infection."

Symptoms such as expectoration, hemoptysis, and night sweats were slightly increased in the first stage of silicosis but probably were indicative of infection. In summarizing, Irvine states that during the first stage of silicosis the following signs are usually present:

1. A certain lack of elasticity of the chest wall during movements of respiration together with
2. A somewhat reduced air entry and
3. A characteristic alteration of the inspiratory murmur from the normal "vesicular" character to a higher pitched or "harshened", "thinned", and commonly somewhat shortened type, the expiratory murmur, although prolonged, remaining fainter than the inspiratory.

Irvine further states "that this type of breath sound is very characteristic, with some

modification, of silicosis in all its stages. It is first noticeable at the anterior, lateral, and basal regions of the lungs. In a minority of cases, he finds, however, that the breath sounds may be simply diminished, usually no rales are heard."

In general there is an agreement in the literature with the signs and symptoms given by Irvine for the early stages of silicosis. On the other hand, it would be impossible to make a diagnosis of the condition on these meagre grounds without a careful history of exposure to the silica dust and without x-ray evidence of the disease.

In the second stage of silicosis, which corresponds to the primary stage of South Africa, a definite shortness of breath upon exertion is usually found, and pains in the chest are frequent complaint. A dry morning cough is frequently present, sometimes with vomiting and recurrent colds are frequent. Even then the man's appearance may be healthy but he is dyspneic on exertion, he cannot work as well as formerly and his chest expansion is noticeably decreased. The characteristic roentgenographic appearance is a generalized medium-sized mottling throughout both lung fields. The shadows of the individual nodules are for the most part discrete and well defined on a background of fibrous arborization, but there may be here and there larger but limited opacities due to pleural thickening, or to a localized aggregation of nodules.

It is remarkable how well men often are during this stage and how little they are physically handicapped to carry on their strenuous work in the mines.

In the third stage (corresponding to the secondary stage of South Africa) the shortness of breath is marked and distressing even on slight exertion. The symptoms enumerated for the second stage are present but more marked, the cough is more frequent, the expectoration is in most cases slight but may be copious. The individuals' capacity for work becomes seriously and permanently impaired; his chest expansion is greatly decreased, he may lose flesh, and there may be symptoms of cardiac decompensation. The radiographic appearances in the third stage are further accentuated, the mottling is more intense and the nodules are larger and take on a conglomerate form so that the larger shadows are shown corresponding to areas of dense fibrosis.

Irvine states that few cases of advanced silicosis are without the infectious element although this may be latent and not apparent clinically. He noted that the general nutrition may be quite good and that many of the men are obese. With few exceptions there is some cyanosis and some obvious dyspnea. The chest has the appearance of moderate emphysema and a greater or less degree of emphysema is a constant feature, the chest expansion is decidedly impaired, the percussion note is dull to flat. Inspiration is short and decidedly reduced, and expiration is high pitched but may be merely reduced. Occasionally, secondary cardiac dilatation with marked cyanosis and edema, eventually resulting in death, are seen.

The more recent studies of silicosis in this country agree closely with the observations of Irvine who further calls attention to the fact that the supravention of active tuberculosis is usually very clearly indicated by a definite and progressive loss of weight, increased cough and expectoration, sometimes with hemoptysis and rapid breakdown of the patient's condition. Dyspnea appears to be out of proportion to the actual extent of infection. Sayer's reports that 267 cases of silicosis plus tuberculosis were found among the 7,722 men examined in the Picher group and the observations in these cases were similar to those described by Irvine.

From the many studies reported in the literature it may be concluded that the cardinal symptoms of silicosis is shortness of breath, the cardinal sign decreased chest expansion, and the earliest specific diagnostic indication, the characteristic roentgenographic appearance. On the other hand, a diagnosis of this disease should not be attempted without correlating all the possible facts such as the occupational history, symptoms, signs, laboratory, and roentgen observations.

Of all these methods at reading a diagnosis of silicosis, roentgenograms are the most important. Smith states that where economy of time and expense is desirable it would seem entirely legitimate to limit the examination to a good roentgenogram combined with an occupational history. She goes further to state that

in studies made of silicosis among miners of the Tri-State District of Oklahoma, Kansas, and Missouri there was very little difference in lung expansion between the negative group and the group having third stage silicosis. Moreover, it was found that in 25% of the men with well developed silicosis the lungs were apparently normal by physical examination. Watkins-Pitchford discovered that of a group of 541 miners who had been receiving compensation for silicosis on the basis of a physical examination alone, 41% were found not to have it when x-rays were introduced.

It is interesting that, among granite cutters, four individuals with advanced silicosis had vital capacities for instance more than 92% of normal calculated on the basis of height. The grerat importance of the roentgenogram in making a diagnosis of silicosis is stressed by most workers in the field. Among these are Cooke, Russel, Panwert, etc.

It may be emphatically concluded that except in the advanced stages it would be frequently impossible to make a diagnosis of this condition without x-rays and for accurate study the two most important materials are in the first place a careful occupational history and in the second place good chest x-rays.

Differential Diagnosis

In a discussion of the differential diagnosis of pneumoconiosis from other diseases Pancoast and Pendergrass divide pneumoconiosis into three stages from a roentgenological standpoint:

1. In the perivascular-peribronchial-lymph node stage, the hilar shadows are more prominent than usual and of greater diversity and homogeneity. The trunk shadows and linear markings show increased prominence. The appearance is not pathogomonic of pneumoconiosis because it is produced by many other conditions. Furthermore, these appearances should not be ascribed to pneumoconiosis unless shown to have arisen during serial examinations and unless all conditions producing like abnormalities can be excluded.

 The following conditions may closely simulate the appearances of this phase of the condition:

 a. Passive congestion of the lungs as a result of cardiac decompensation. In this condition the enlargement of the heart shadow, the abnormalities of the cardiac silhouette especially in the case of mitral stenosis, and the clinical picture serve to establish the presence or absence of passive congestion. It is to be noted that emphysema and passive congestion often occur in the course of all the stages of pneumoconiosis and serve to greatly accentuate the roentgenological appearance of the condition.

 b. Passive congestion associated with coronary thrombosis leads to prominent hilar and trunk shadows lasting from three to six weeks after the attack. This appearance and the clinical evidence of decompensation will clear up when compensation is established. Pancoast and Pendergrass saw one case of this kind mistaken for pneumoconiosis.

 c. Advanced Bilateral Bronchiectasis in which there are dilated bronchii retained secretions and associated tracheobronchitis, the appearance is that of greatly accentuated trunk shadows which may simulate this stage of pneumoconiosis.

 d. Asthma may produce various alterations from the normal roentgenographic appearances of the lungs. There may be an intensification of the hilar and trunk shadows and very often an associated coarse mottling of the lung fields. The two conditions may be associated and what might be a very moderate degree of incapacitating pneumoconiosis would have its appearance greatly accentuated by the asthma. It is usually easy to differentiate these two conditions both from a clinical and a roentgenological standpoint.

 e. Malignant metastases in the lungs not uncommonly take on the appearance of greatly accentuated hilar and trunk shadows which closely simulate the appearance of pneumoconiosis.

 f. Polycythemia usually has associated with it an increased prominence of the hilar and trunk shadows due to the engorged pulmonary vessels. On the other hand, high red cell counts, even sufficient to suggest polycythemia are very frequently associated with pneumoconiosis. There seems to be reason to believe that lung fibrosis and pulmonary arteriosclerosis can produce a condition akin to polycythemia and presumably due to impaired interchange of oxygen and carbon dioxide. Yates and Constam state that secondary pulmonary arteriosclerosis involves the larger vessels and may be due to mitral stenosis, emphysema, congenital heart disease and conditions in which the lung volume is reduced as tuberculosis and tumor.

g. Mycotic infections of the lungs generally produce appearances simulating the nodular phase of pneumoconiosis but occasionally they may be confused with the perivascular - peribronchial - lymph node aspect of the condition. The differentiation may be most difficult or impossible. It is often on clinical grounds that the differential diagnosis must be made.

2. The early interstitial stage of pneumoconiosis is characterized by a rather faint homogeneous haze, appearing first in the right mid or lower lung field and then in the left and gradually spreading in extent. Small discrete dense nodules may or may not coexist. The hilar and trunk shadows are noticeably accentuated. There is more or less interference with diaphragmatic excursion. Aside from the differentiation of a tuberculous pneumonic process in the rapidly developing cases, the only other conditions to cause confusion in the proper interpretation of the homogeneous haze would be an interstitial pneumonitis and a rheumatic pulmonitis. The differentiation is an important one.

3. The nodular phase is productive of the most characteristic roentgenographic appearances of pneumoconiosis. While it is quite typical of the condition, it does not occur in connection with all industries, especially when the intake of silica is unusually copious and the condition of silicosis is rapidly progressive. The characteristic appearance of the slowly progressing type is that of small, dense, discrete nodules throughout both lungs. There is no definite pleural involvement. In the more progressive type the smaller nodules become larger and conglomerate and there are further evidences of interstitial fibrosis obscured by the associated emphysema. In the more progressive type of smaller nodules become larger and conglomerate and there are further evidences of fibrosis indicated particularly by restricted diaphragmatic excursion and often peaking of the domes. The appearance may be simulated by a number of conditions, including tuberculosis of the perinodular type, tuberculous bronchopneumonia and miliary tuberculosis. The appearance is also simulated by:

a. Nodular metastatic malignant conditions of the lungs. Most cases of this kind are readily differentiated from nodular silicosis but occasionally one encounters a case in which appearances are very similar because the metastatic nodules are small, unusually numerous and widely and symmetrically scattered.

b. Actinomycosis may occasionally present an appearance like that of nodular silicosis, although the nodules are usually larger and less numerous in comparison with it.

c. Spirochetosis may give an identical roentgenological appearance to this stage of silicosis. These various conditions make it apparent that one cannot rely on the x-ray alone for a diagnosis of silicosis, but that the history and the laboratory must be enlisted in making an accurate diagnosis.

d. Leptothrix infection may also be difficult to diagnose from a roentgenological standpoint. There are other fungi such as monilia that from an x-ray standpoint cannot be differentiated from silicosis, though in all these conditions a careful search of the sputum, the history, and the course of the disease eventually point to the correct diagnosis.

4. The advanced diffuse or terminal fibrosis stage of silicosis must be differentiated mainly from chronic diffuse tuberculosis or an accompanying tuberculosis is to be determined. Occasionally a case showing massive fibrotic areas mesially located may present an appearance resembling a mediastinal tumor.

BIBLIOGRAPHY

1. Watkins-Pitchford, W.: Silicosis of the South African Gold Mines, J. Indust. Hyg. 9:109, 1927.
2. Smith, A. R.: The Unreliability of the Physical Examination in the Diagnosis of Silicosis, Ind. Med. 3:277, May '34.
3. Cooke, W. L.: Pneumoconiosis: A partial review of the literature, the W. Virginia M. J. 28:19, Jan. '32.
4. Britton, J. A. & Head, J. R.: Pneumoconiosis: The Delayed Development of Symptoms, J.A.M.A. 96, 1938-1939, June 6, 1931.
5. Sayers, R. R: The Clinical Manifestations of Silicosis: J.A.M., 101; 580-583 Aug. 19, '33.
6. Irvine, L. G. Report Upon the Work of Miner's Phthisis Medical Bureau for the Year ended July 31, 1928, Preoria, Union of South Africa.
7. Sayers, R. R.: Meriwether, F. V., Laya, A. J. and Adams, W. W.; Silicosis Among Miners of the Tri-State District of Oklahoma, Kansas ,and Missouri; U. S. Bureau of Mines Technical Paper 545, Washington 1933.
8. Russell, A. E.: Silicosis and Associated Respiratory Diseases: The Jour. Lancet; 53:599-609, Nov. 15, '33.
9. Pancoast, H. K. and Pendergrass, E. P.: Roentgenologic Aspect of Pneumoconiosis and Its Differential Diagnosis; J.A.M.A. 101:587-591, Aug. 19, '33.

THE PHYSICIAN'S IMPORTANCE IN WAR AND PEACE

To memorialize the medical profession's "skill and courage and devotion beyond the call of duty" is the purpose of the new prize-contest recently announced by the American Physicians Art Association.

The contest is open to all physicians, both civilian and military, who are members of A.-P.A.A. The prizes are sufficiently important to attract some very fine art in all of the principal media, including oil, water color, sculpture, and photography.

For full details, write to the Association's Secretary, Dr. F. H. Redewill, Flood Bldg., San Francisco, Cal.

STANDARDS FOR HOSPITAL RADIOLOGICAL SERVICES

DR. MAITLAND S. DIRKS
Phoenix, Arizona

Mr. President, Members, and Guests of the Arizona Hospital Association:

I appreciate the honor which Dr. Sechrist has given me of permitting me to speak before you on the subject of "Standards for Hospital Radiological Services." I am sorry that Dr. Watkins was unable to bring you his views regarding radiological practice in our Arizona Hospitals because, his experience is both wider and older than mine.

Definitions are tiresome but the use of the term "Radiologist" may not be familiar to all of you. Perhaps, if I am fortunate, when I have finished with what I have to say, you may have a better idea of the meaning of this word "Radiology" than an aunt of mine had when she was trying to console my mother upon my leaving home to study the medical aspects of x-ray diagnosis and treatment in the University of Iowa Hospitals. I had not then been far from home for any length of time. It was not too clear to friends and members of my family what the nature of my work would be. Finally, my dear aunt had this to say to my mother, "It must be terribly hard for you to see him spend all these years studying medicine and then give it all up to fix radios." Radiology is that branch of medicine which deals with the use of x-rays and the problems of radium. Because of limitations of size and equipment of some hospitals, many physicians qualified in Radiology are forced to limit their work in the hospital to only a portion of what they are potentially trained to do.

Dr. Boyd has already addressed you on the subject of "The Doctor's Relation to the Hospital." Therefore, I will direct my remarks more toward the operation of the hospital Radiological department. Proper standards vary with the size, location, and staff of each hospital, but detailed suggestions and principles for adequate service have been set forth from time to time by Council on Medical Education and Hospitals of the American Medical Association. This was recently reported in the Journal of The American Medical Association for 1939. The American College of Radiology and the American College of Surgeons have assisted in preparation of detailed standards. Assistance in coordinating this work has come from the report of the Council on Community Relations and Administrative Practice of the American Hospital Association, published in "Hospitals" for the year 1937. I refer you to these reports rather than attempt a detailed analysis of necessities for each class and size of hospital.

General principles apply, however. The responsibility for all radiologic examinations must rest on the physician-radiologist, who is head of the department. His findings and conclusions for all examinations should be placed in the patient's chart. In the case of the larger hospital in the larger centers, this director should be a physician who is qualified by the American Board of Radiology in his specialty. If the hospital is 200 beds or larger, his full time services are required. If the hospital is smaller but unusually or steadily active, it is desirable to have a full time qualified Radiologist or Roentgenologist even in cases where the bed capacity may be as low as 125 to 140 beds.

Smaller hospitals need a well organized x-ray department but proportionately less of a trained radiologist's time. He should give the hospitals a definite schedule of hours when he will be in the department for consultation. This should coincide with the day and time of the staff meeting where feasible.

Where no trained director is available, it is desirable for a member of the hospital staff to take one of the short intensive courses in x-ray diagnosis only, at such a center as Columbia University. Where this is not possible, the physician-director should have adequate equipment for good fracture work and the simpler diagnostic procedures. It is probably best that he not attempt often to do the more intricate procedures involving contrast media. I do not need to labor the point that x-ray treatment is dangerous to the patient and personnel in inexperienced hands. A physician not prop-

erly qualified should not be urged by his staff to undertake this phase of radiology.

PERSONNEL: In hospitals of 35 to 50 beds, taking general cases, the department will need the assistance of an x-ray technician whose duties are devoted for at least part of the day to obtaining films of proper quality for correct interpretation. Where only one person is needed, a technician who is a nurse makes operation of the x-ray department smoother and more satisfactory to patient and doctor. Larger departments will need one or more technicians full time plus the assistance of a secretary and often a nurse. The latter is most needed where therapy cases are taken for treatment.

FUNCTIONS: The first function of a hospital Radiological department is to provide the means by which a radiologist or director may render adequate service to the hospital patient. This should mean in smaller hospitals a unit of sufficient power to produce a chest film in 1/10th of a second's time with the patient 6 feet from the x-ray tube. There are many other desirable features including the ability of the apparatus to provide for fluoroscopy of the patient in the upright and in the horizontal postures, as well as for what we term "grid" films of good quality in the same positions.

The Radiological departments of hospitals of 100 to 125 bed capacity and larger, should in general, include facilities for obtaining excellent diagnostic films which smaller machines do not produce, and also provide the three usual types of x-ray therapy. These are superficial, intermediate, and deep therapy. Where x-ray therapy is used it is often best to include a minimum of 50 milligrams of radium element in containers chosen by the radiologist. This may sound at first as if three classes of x-ray therapy units would be required. Fortunately, this is not so. A unit primarily intended for adequate diagnostic work or radiographic work as it is technically called, can also be used, when properly designed, for superficial x-ray treatments as well. Dr. Salsbury has such a unit at Ganado and we have the same type of machine at St. Joseph's Hospital. This type of machine, of which there are several makes, sells for around $4,500 and is capable of making all ordinary x-ray examinations with good resulting quality. The superficial x-ray therapy feature is most useful when properly supervised.

Deep therapy apparatus is primarily intended for operation at around 200,000 volts which we term 200 kv. but, it is also possible on most present day deep therapy units to adjust the mechanism for use in cases requiring intermediate therapy around 120 to 140 kv. This description is admittedly technical but I give it to show that a hospital can save money by first obtaining the advice of a radiologist in planning a department, and then approving for purchase a multi-purpose equipment which costs no more initially. A deep therapy machine does represent an investment of at least $5,500. But, since it is applicable only to hospitals which require the services of a trained radiologist for a minimum of two to three hours daily, the volume of business usually can be counted on to justify it. I am aware that space limitation has prevented several of our larger Arizona Hospitals from including adequate x-ray therapy service. I hope soon to see this situation corrected when construction can again be undertaken. X-ray therapy should be looked upon as a distinct need of the patient and provided where possible. In my opinion it should be considered essential to adequate hospital care where a qualified radiologist is department director and the hospital records show a sufficient number of the type of cases admitted which are amenable to treatment. Even when the revenue simply offsets base cost of operation of the equipment and sufficient additional perhaps to repay or nearly repay depreciation. This may seem to you folks in hospital management as unsound, but I would point out that Groover has shown in his widely read report on cost of operation of Radiological departments that: first, in those cases where 50% of the professional time and effort and 50% of the departmental operation cost go to operation of the therapy section, yet, only 30% of the revenue is obtained from therapy cases. But, in such balanced departments the entire department is financially sound since total operation costs can be kept between 33 and 35 per cent of the gross income, since 70% is derived from diagnosis.

I will ask your tolerance to mention two more figures which must be important to you

when considering the operation of your hospitals. On the average it is agreed that in the smaller hospitals of less than 75 beds, depreciation of x-ray equipment amounts to about 15%. For larger hospitals this figure seems to be smaller and around 10% for installations which place two-thirds of their emphasis on diagnostic work and one-third on therapy. Of course, an unbalanced percentage of therapy work above 50% would increase this figure again.

RECORDS: In addition to complete records of the opinion of the radiologist kept in the patient's chart and in the department for reference, a word should be said about care of films. These should be filed systematically by number or name, and crossed-indexed if possible along with reports. Physicians should be free to borrow them for reference, but they should return them promptly. You people can help your hospitals and the radiologist by helping to impress the patient with the fact that he bought medical opinion and hospital service and did not purchase the film any more than any other part of his permanent hospital record. Seven years is now considered long enough to keep x-ray films. The records should be kept indefinitely.

It has been a great privilege to speak before you, and I thank you.

THE CLINICAL VIEW OF SILICOSIS

WILLIAM MAGILL SCHULTZ, M. D.
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IN a consideration of the clinical development of silicosis it is noteworthy first of all that a good deal of time elapses ordinarily between the beginning of exposure to silica dust and the appearance of the first evidences of silicosis. Reports vary. but the average amount of time required for the development of the first symptoms may be roughly estimated to be from five to ten years from the beginning of exposure. The duration of the disease from the beginning of symptoms until the end may also be roughly averaged at about ten years—six to eight years with moderate symptoms, moderate impairment of working power, and little apparent change, and then a year or so of complete disability and prostration.

The duration of the disease as well as the time that it takes to get started vary inversely largely with the intensity of the silica bombardment to which the worker is subjected. The heavier the load of silica in the inspired air the earlier the symptoms will begin and the shorter will be the course of the disease. Miners, for instance, using air drills in hard rock are affected more quickly than those working without air drills in softer rock that contains less silica. Similarly a form of "acute silicosis" is recognized that occurs chiefly where scouring soaps and powders are made by mixing finely powdered silica with alkaline soap. It was at first thought that the chemically admixed alkali made the silica more deadly, but it is now believed that the rapidly fatal acute silicosis is caused simply by the massive doses of silica inhaled in the very dusty process—doses heavier than those encountered in other industries. Series of cases of "acute silicosis" are reported that were exposed for from eight to twenty-one months, that developed symptoms in from nine to twenty-four months after the beginning of exposure, and that terminated fatally in from fourteen months to seven years.

Once started the silicotic process seems to be able to go ahead under its own steam. Although, of course, exposure may be continuous until symptoms appear and until the power to work ceases, this is by no means invariably or necessarily so. It is very important to recognize that exposure to silica dust may have ceased finally before any symptoms of silicosis appear, and that having thus appeared the disease may progress to a fatal termination without re-exposure. One case is known to have been exposed for four months, to have had an interval of twenty-three years free from exposure, and then to have developed silicosis; and another, to have been exposed for four years, with a free interval of fourteen years following, before the appearance of the disease. Other cases with latent periods up to fifteen years are reported.

The composite clinical picture of simple, uncomplicated silicosis has been arbitrarily divided into three stages. Throughout the entire course however, the cardinal, predominating symptom is *dyspnoea* upon exertion.

The first stage begins very insidiously. The first symptom to appear is almost invariably slight *dyspnoea* upon exertion, generally more noticeable at the beginning of the day. There is perfect comfort apart from exertion—general health, nutrition, muscular development, hemoglobin and red cells, all are excellent. There is no disability. There may or may not be a bronchitic non-productive cough, and rarely this is the first symptom reported. The first physical sign noted is very slightly decreased expansion of the chest, bilaterally, and fluoroscopically the first change is a very slight decrease in the amplitude of the excursion of the diaphragm, bilaterally (thought to be due to inelasticity of the lung as much as to pleural thickening or adhesion). Later slight dullness on percussion may be detected over the roots of the lungs. Inspiration may be heard to be thinner, higher pitched, and harsher than normal, and expiration somewhat prolonged but fainter than inspiration. There may be a few basal rales. There may rarely be asthmatic wheezing.

In the second stage there are definite *dyspnoea* on exertion, pains in the chest, sometimes expectoration, sometimes a dry cough that may lead to vomiting. There is definite impairment of working capacity. All physical signs previously noted are more pronounced. Chest expansion, if measured, is found to be less than before.

In the third stage, *dyspnoea* is marked and distressing upon the slightest exertion. Cough, sometimes with copious sputum and occasional hemoptysis is frequent and annoying. Rarely there is fever. Evidence of the cor pulmonale appears in accentuated pulmonic second sound, cyanosis, and in right axis deviation in the E. K. G., and later in rapid pulse, cardiac dilatation, and decompensation. Possibly a third of the cases have curved nails and clubbed fingers. There is loss of weight and strength, and serious and permanent impairment of working capacity. Inspection shows a chest flattened and smoothed and frequently not barrel shaped, with a great decrease in expansion bilaterally and at times retractions substernally and at the bases laterally. Rarely the signs of cavity formation may be detected. The picture is of the rigid lung of fibrosis mixed with emphysema.

Asbestosis is a somewhat distinct form of silicosis that presents some minor differences from it. Observers report that the skin may take on a leaden, pasty hue, and the early appearance is less robust. Cyanosis and slight clubbing of the fingers appear early and there is a greater tendency to right heart insufficiency. Hemoptysis is more frequent. Many other symptoms appear to be milder. There is less complicating tuberculosis. The sputum may contain "asbestos bodies", and asbestos fibres frequently become imbedded in the skin and cause "asbestos corns."

Spontaneous pneumothorax occurs in silicosis, sometimes bilaterally. It is not frequent but must be considered a complication of the disease. It is thought to be due to the tearing of an emphysematous bleb by a pleural adhesion or to the advance of ischaemic necrosis the result of dust infiltration. It occurs oftenest in the apical region.

Bronchogenic carcinoma is reported in connection with silicosis, allegedly caused by irritation from silica.

The prognosis in simple silicosis is bad. It is commonly said that "no improvement can be expected in silicosis." Most cases go on to a fatal termination. However, studies have been made of cases in sanatoria and a percentage has been reported improved while under treatment. Some workers incline to the belief that if the rest treatment given to tuberculosis were given to silicosis long and faithfully enough, the prognosis might be more hopeful.

Silica is of very great importance and interest for two reasons. First, of all the organic and inorganic dusts encountered in industry silica alone (with its magnesium silicate, asbestos) produces a distinct, progressive disease entity, which is now recognized as a deadly industrial hazard. Although some students hesitate to admit the existence of a simple silicosis uncomplicated by pulmonary infection, it is pretty generally accepted that such cases do exist and have been exhaustively studied both clinically and post-mortem without the discov-

ery of any evidence of tuberculous or other infection. In the second place, however, silica alone of all the organic and inorganic dusts does stir up a most extraordinary susceptibility to tuberculosis. The fact is that sooner or later most cases of silicosis do develop pulmonary tuberculosis, either because silica reawakens previously existent quiescent foci or heightens susceptibility to bacilli subsequently implanted. It has long been a dictum that seventy-five per cent of silicotics die of tuberculosis. This percentage is now thought by some to be a little high, and it is considered that the cor pulmonale leading to congestive heart failure cuts it down somewhat, but all agree that a very substantial proportion of silicotics do die of pulmonary tuberculosis.

When silicosis is complicated by tuberculosis the situation becomes graver both for the patient and for his contacts. For a while tuberculosis may coexist with silicosis without changing the picture and without detection except with great difficulty, but soon there is a change and the course goes rapidly downward. Toxic symptoms such as fever and rapid loss of strength and weight arise, sputum may become positive, cavities may form, frank hemoptyses are not infrequent, pleural effusion may develop, tuberculous lesions may appear elsewhere in the body, and a study of serial x-rays over a period of time may show the developing tuberculosis. The physical signs differ somewhat from those of simple tuberculosis and suggest a bilateral, symmetrical fibrosis over-shadowed by emphysema, with consolidation and excavation in the hilar and basal regions predominantly, of both lungs.

It is hoped that nothing in this resume will encourage the belief that silicosis, with or without tuberculosis, is an easily diagnosed affair. Actually, every case confronts the physician with a diagnostic problem that is frequently difficult in spite of all the help that a careful history and a competent roentgenologist can give, and that is always of urgent importance not only to the patient but also to the public health.

APPENDICITIS COMPLICATED BY RUPTURE OF THE INFERIOR EPIGASTRIC ARTERY

GEORGE O. BASSETT, M. D.
Prescott, Arizona

SPONTANEOUS hemorrhage from the inferior epigastric artery is not rare. Its occurrence on the right side simulating acute appendicitis is interesting and adds one more factor to the diagnosis of the latter condition. In that a search of the records fails to show that the two entities have been reported as occurring simultaneously, this situation is unusual.

Rupture of the inferior epigastric artery may be due to trauma or may occur spontaneously. It has been reported as a post-operative occurrence but in these cases may be considered as probably the result of trauma to the belly of the rectus abdominis. Cases following a severe coughing attack are considered traumatic, if immediate.

Mailer, writing in the British Medical Journal in 1936, mentions the possibility of hemorrhage from the right inferior artery being erroneously diagnosed as acute appendicitis. This is especially possible where the rupture is spontaneous, although Hilgenreiner in 1924, referring to a group of seven cases following violent exercise among recruits refers to the possible mistake in diagnosis that may occur.

The following case is reported as of interest as it was associated with definite inflammation of the appendix.

The author was called April 30th at 9 A.M. requesting an appointment. The patient stated that he thought he was having an attack of appendicitis. He was seen at 10 A.M. He was a robust male, age 56, who seemed in great pain. He gave a history of being awakened at 3 A.M. with a sharp pain in the right lower abdomen. He was nauseated and vomited shortly afterwards. The pain was severe enough to cause him to draw his right leg up for ease. Because he had had previous attacks he decided not to call the doctor until morning. He stated that he had had a severe cold for the past ten days, accompanied by a paroxysmal cough. He

had retired at 10 P. M. and had had several coughing spells shortly after retiring.

His previous history was negative except for several attacks of lower right abdominal pain, diagnosed as appendicitis by the attending physician. The last about 15 months ago. He had remained in bed with each previous attack for several days, without food, an icebag on his abdomen. For the past year he had been very well, had had no pain in the abdomen, no epigastric distress, and his bowels had been fairly regular. He was employed as a telegraph operator, worked long hours and was irregular in his eating habits. He had partaken of no unusual food the day preceding the attack.

Examination showed a florid heavy-set man lying quietly with his right leg drawn up. His expression was anxious. The temperature was 99.2, pulse 94, respirations 20. The blood pressure was 154/90. There was no noticeable sclerosis of the radials. The heart was not enlarged to percussion, there was no murmur or other evident abnormality. The expansion of the chest was full and equal on both sides. The breath sounds were somewhat harsh and there were scattered S&S rales throughout both lung fields, especially at the bases. Fluoroscopy of the chest and heart was negative. The remainder of the examination, except the abdomen was negative. He gave no history of kidney, bladder or prostatic disease. The urine showed Albumen 2 plus, pus cells 1 plus, and a few granular casts. He had had a negative Wassermann about six months before.

The abdomen was full, there were no scars, and no evidence of hernia. Over McBurney's point there was increased fullness that extended medially into the lower portion of the right rectus. On palpation there was definite tenderness over McBurney's point that extended medially over the same area. A very definite muscle spasm was noted over the same area. The tactile test was clear cut and positive below a line drawn parallel to the umbilicus. Percussion showed increased tympany in this region, and very light percussion over McBurney's point and medially elicited quite marked pain and spasm, and provoked nausea.

He was sent to the hospital with a diagnosis of acute appendicitis and blood counts were ordered. He was given no food, and ice bag was kept on his abdomen and he was given codeine by hypo for cough. The first count showed, red cells 4,950,000, total white 9,750, polys 65. About six hours later the second count showed, red cells 4,870,000, total white 11,.750, polys 71%. At this time his abdomen was re-checked. The tenderness was possibly more marked. The swelling before described was more noticeable, the muscle spasm was increased although he stated he had much less pain. Because of the increased swelling and low white count it was decided to watch him for 24 hours. He was given water freely and did not vomit further, though he had some nausea. He was given codeine enough to control the cough. The following morning the blood count showed, red cells 4,700,000, total white 12,400, polys 74. A further check of the abdomen showed an increase in the area of swelling with possibly some increase in the tenderness. He had a tendency to frequency but was otherwise comfortable. His temperature was 99, pulse 84, resp. 18. The second urinalysis was essentially the same. An enema gave a return of a soft copious stool and afforded him some relief. He rested quietly all day and was prepared for surgery the following morning.

Although we mould not ignore the possibility of an appendix, we felt that with the increasing swelling, great tenderness extending into the lower part of the right rectus belly, and falling red count that we might find a ruptured inferior epigastric artery.

Under spinal anaesthesia he was operated the following morning. A right rectus incision was made. As soon as the fascia was exposed it was observed to be bluish in color and very tense. On careful incising it was found to be very friable, and as it separated a large blood clot exuded from the sheath. The blood clot extended from the umbilicus downward. It surrounded the rectus muscle and extended as a large mass into the pre-peritoneal tissues, The rectus muscle was fragmented badly. When the clot was removed the deep epigastric at a point one half inch within the sheath was found to be spurting briskly. The accompanying vein was torn. Both were doubly ligated. The peritoneum was opened and the blood clot was observed to extend under the peritoneal reflection on the bladder. The caecum was lift-

ed. There was a moderate amount of cloudy fluid in the fossa, the appendix was retrocaecal, injected and swollen. A fairly heavy band of adhesions was found midway. The appendix was removed and stump inverted. The abdomen closed in layers without drainage.

Convalescence was uneventful. He was given sulfamerazine to clear up the bronchitis and discharged on the 9th post-operative day. On the third post-operative day the urine was entirely clear.

This case was interesting as a study in diagnosis. Operation was deliberately postponed in order to observe events, though we were prepared to intervene at any time if events indicated. The classic picture as presented when the rectus sheath was entered could not fail to excite comment, with tremendous fragmentation of the rectus muscle. The infiltration of the hemorrhage into the peritoneal reflection above the bladder certainly explained the frequency. It was not so easy to explain the urinary findings solely on the basis of the hemorrhage. It was felt that the paroxysmal cough was probably indirectly the cause of the rupture, although the delay in the onset of the pain was not so obvious, as it had been sudden and acute and followed any recalled coughing spell by quite an interval. No previous report of rupture of the right inferior epigastric artery associated with acute appendicitis has been noted in the literature.

Cancer Section

CANCER OF THE PROSTATE

By John W. Pennington, M. D.

In 1941 one of the outstanding contributions in the treatment of cancer was presented to the American Urological Association by Dr. Huggins[1] of Chicago. This treatment of prostatic cancer was the result of his application of castration in an effort to change the serum acid phosphatase content in the blood of patients with enlarged prostates. At the same meeting Munger[2] of Lincoln, Nebraska, presented a paper advocating the x-ray castration of patients with carcinoma of the prostate. Later the natural oucome of these methods was the use of estrogenic substance in the treatment of prostatic malignancy.

The etiology of prostatic cancer is no more definite than any other of the ordinary malignancies. Wilhelmi[3] of St. Louis feels that the serum acid phosphatase is of no value in early diagnosis of prostatic cancer and a more standardized ratio must be recorded before the test is of definite value to the surgeons. He feels that urinary acid phosphatase from Demuth's work appears to be more accurate and constant than the serum acid phosphatase in evaluating the stage of the disease.

T. J. Sullivan, E. B. Gutman, and Alexander B. Gutman[4] attempted to correlate the serum acid phosphatase determination as a guide in the diagnosis of prostatic lesions. To date there have been few reports in regard to the type of prostatic malignacies that can be expected to show good results from the various methods of treatment. Wilhelmi feels the undifferentiated type of carcinoma and those cases with light weight testes have a poor prognosis. It is hoped that a standardization may be worked out as a guide to the type of therapy indicatetd and the results expected.

In the treatment of prostatic malignancy one must refer to the pioneer work of Dr. Hugh Young with his radical perineal prostatectomy, which has so ably been carried on by Hinman, Belt, and others. In a very early malignancy with no extension, or little extension, the radical perineal prostatectomy offers a very good chance of cure, but this operation should only be done by surgeons who are capable perineal anatomists. The use of transurethral resection in the treatment of malignancy of the prosatte is well discussed by G. J. Thompson[5] of Rochester, Minnesota. He concluded that in a high percentage of cases complete freedom in the voiding of urine is provided by transurethral resection and that this freedom exists until the patient dies of metastasis or other unrelated disease. Thompson felt that if transurethral resection is combined with Huggins procedure of castration, the results in the future should be superior to those in the past.

CASTRATION. This procedure alone is applicable in those patients who have an absence of marked bladder distress and disfunction, although it probably will afford a great deal of

relief, if not entire relief, even though there is considerable residual urine.

Estrogenic substances can be used orally, by pellet implant, or subcutaneously by hypodermic injections; and, if adequate dosage is given, offers considerable relief, possibly even arresting the cancer.

An evaluation of the results obtained from the varions forms of treatment was very satisfactorily given by Nesbit and Cummings[6] of Ann Arbor, Michigan, in the Jannary 8, 1944 issue of the Journal of American Medical Assaciation. In a follow-up on 75 cases of prostatic carcinoma treated by orchiectomy they found there was a very spectacular early relief of pain usually obtained in from 20 to 72 homrs, althongh occasionally the pain subsided over a period of several weeks. Many patients gained as much as 50 to 60 pounds in weight. They found urinary obstruction, even acute retention, responded satisfactorily in all cases. In their series of 75 patients 10 derived no benefit at all from orchiectomy. 45% of the cases obtaining relief remained free of symptoms up to 36 months after the orchiectomy, but 21 patients who had immediate satisfactory results had reenrrent symptoms of advanced disease. Nesbit and Cummings felt that it was logical to conclude that the maximum benefit to the patient may be derived by delaying endocrine treatment until indicated by the onset of symptoms arising from advanced or metastatic lesions. Only in this manner could a longer period of palliative relief be assured.

In the writer's opinion, orchiectomy should be done as soon as the diagnosis is established. I feel the only way to make a positive diagnosis is by microscopic section of the tissue, which is usually best obtained by a transurethral resection. If bony metastasis are demonstrated, the use of estrogenic substance should be started immediately after orchiectomy and continued indefinitely. If metastasis recur or become painful, deep x-ray therapy often will alleviate the pain from these lesions. In my own experience x-ray castration by exposing the testicles has not proven as satisfactory as the other methods. It is my opinion that between 50% and 60% of patients with carcinoma of the prostate can be given quite satisfactory relief by using one of the above mentioned forms of therapy or by a combination of two or more of them.

1. Huggins, C.; Scott, W. W.; and Hodges, C. V.: Studies on Prostatic Canver III, J. of Urol. (Nov.) 1941.
2. Munger, A. D.: Experiences in the Treatment of the Prostate witr Irradiation of the Testicles, J. of Urol. (Nov.) 1941.
3. Wilhelmi, Otto J.: Carcinoma of the Prostate, J. of Urol. (Sept. 1943.
4. Sullivan, Thomas J.; Gutman, Ethel Benedict; and Gutman, Alexander B.: Theory and Application of the Serum "Acid" Phosphatase Determination in Metastasizing Prosaic Carcinoma; Early Effecs of Castration, J. of Urol. (Oct.) 1942.
5. Thompson, G. J.: Transurethral Resection of Malignant Lesions of the Prostate Gland, J. A. M. A. 120:1105, 1942.
6. Nesbit, Reed M. and Cummings, Robert H.: Prostatic Carcinoma Treated by Orchiectomy, J. A. M. A. 124:80, 1944.

U. S. SOLDIERS FITTEST EVER, GENERAL SAYS

Army Surgeon General Reports Falling Death Rate From Disease and Wounds

Today's American soldier is the healthiest to ever take the field against the nation's enemies, Maj. Gen. Norman T. Kirk, Army Surgeon General, maintains.

The rigid screening process by which both civilian and military doctors have weeded out the physically and emotionally unfit is largely responsible, he said in a nationwide broadcast of "The Doctor Fights," Tuesday night (June 20) CBS program, sponsored by Schenley Laboratories, Inc.

In previous wars, the general reported, pneumonia has been responsible for many deaths but "dnring the winter of 1943 something under 1 per cent of cases of pneumonia in the United States armed forces died of that disease."

"Meningitis, which 50 years ago had a death rate approximately 80 per cent and which 25 years ago had been lowered to a death rate of 40 per cent, has today in our armed forces a death rate approximatetly 5 per cent," he contined. "In one great military installation there have been reported 76 consecutive cases of meningitis without a single death."

These figures, Gen. Kirk added, can be applied to most of the common diseases that affect mankind, particularly under military conditions.

"Never before has an army more physically fit than this one taken the field against our nation's enemies," he declared.

The low death rate, he continued, was a tribute not only to physicians but "particularly also the magnificent organization for medical research which is carried on during the war period."

"This research," Gen. Kirk said, "has been reflected in the exceedingly low death rates from wounds of all men not killed outright in the use of such remarkable products as blood plasma, the sulfonamide drugs, penicillin and in the preventive measures for the control of measles, meningitis, typhus and many tropical diseases."

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Editorials

Plans for Medical Care

In the nation-wide poll recently completed by the National Physician's Committee, 63% of all the people voiced the opinion that methods could be devised for easier payments of medical care costs. This is not to be interpreted to mean that the American people want their medical care cheapened. A doctor receives no credit for trying to save his patient any money. Probably nine out of ten patients want complete examinations, including x-rays, blood tests, and all other available laboratory tests. And, any attempt on the part of the physician to eliminate what he might consider as unnecessary expense is very apt to result in a dissatisfied patient. To a great majority of the American people a trip to the hospital and a major operation is an event of a lifetime. It corresponds to a wedding, or a funeral, or some anniversary. They want a private room, three special nurses, and wish no chances taken. Frequently a surgeon sees his fee going into these luxuries, and then has to wait until the family pocket-book is replenished before he is paid.

Those among us possessed with wisdom and vision assure us that Socialized Medicine is coming. When the Government pays the bills as is outlined in the Wagner-Murray-Dingall Gill, our imagination is captured when we visualize some political appointee in the front office of a hospital deciding who shall have a private room and who shall be assigned to a ward bed, and how long certain patients shall retain their three special nurses.

To meet the demand for easier payments of medical care, the entire American Medical Association have given their approval of voluntary prepayment, non-profit insurance plans. At the present time there are some 200 such plans in operation, with a total membership of 25 million. The National Physicians Committee have signified their intention to promote these plans until a membership of 100 million is reached. These plans are formed to fit the particular situations in a specified community. e. g. a plan organized for an industrial center would not operate very satisfactorily in a farming community. The provisions of the different plans vary also, depending on the membership of the unit, and any reserves they have set up. None of them can be said to be ideal, but it has been pointed out that it required 40 years to perfect Old Line Life Insurance. But one of the main pre-requisites of any plan must be that it be a non-profit organization. In this way a certain percentage is set up for operational expense, and all the remainder goes for benefits to the members.

Of these 200 plans, some 70 belong to the Blue Cross, with a membership of about 15 million. The Blue Cross have set up certain standards and requirements, which add much prestige to its membership, and practically make it a nation-wide Organization.

The Associated Hospital Service of Arizona was organized about 5 years ago. With the advent of the war it became dormant. But the Board of Directors are working to make it active again. This should be one of the foremost objectives in post war medical planning for Arizona. It is working to meet all the requirements for admission to the Blue Cross and we hope soon to be able to announce acceptance by this Organization.

Good-by, Old-Timers!

The American Pharmaceutical Association announces a complete revision of "The National Formulary"; new edition expected to be ready late in 1945.

Marked changes in the context will be noted, since it is stated that nearly one-third of the drugs mentioned in the older editions will be

deleted, and that some one hundred fifteen new names will be added. One radical change will be the substitution of English names for those formerly appearing in the Latin language. The latter, however, will in many cases follow the English term, as a secondary title. Metric dosage will be emphasized, although the present apothecary dosage will be maintained, it being felt that many physicians were not ready to drop the use of the old dosage formulae. (This might be considered as a friendly gesture to the oldsters.)

It is planned to standardize the enteric coated medications, since the claim often has been made that many of these preparations are misnamed. Also, it is said that the new Formulary will be more "self-contained," making it unnecessary to look up many items in the Pharmacopoeia.

The various state pharmaceutical associations are being asked to go over the proposed list of deletions and suggest their own ideas about them.

Looking over this list we find many old-time friends, several of which we have been wont to include in our armamentarium. A number of these drugs would be classed as "strangers" by the more recent graduates in medicine, since they are not even mentioned in most modern courses of therapeutics. However, to the oldster they have been stand-bys for years, and they will miss them if they have occasion to consult the new edition of the Formulary

For several years past the Council on Pharmacy and Chemistry of the American Medical Association has issued a volume entitled "Useful Drugs." With each succeeding volume more and more drugs are dropped from the list. Now comes the Pharmacist's Bible, with approximatetly one-third of the formerly-mentioned drugs dropped from the list.

Among the old-timers found in the medicine kit or dispensing room of the older members of the profession, but are now termed passe, might be mentioned Blue Flag; Bryonia; Calendula; Chionanthus; Echinacea—there will be lot of mourning over the passing of this one—Elix. Buchu and Potass. Acetate; Elix. Pepsin and Bismuth; Phytolacca; Plaster of Cantharides; Pulsatilla; Tr. Capsicum and Myrrh; Tr. Cimicifuga and Tr. Sanguinaria. There are also many others dear to the heart of the old-time doctor, many of which we swore by and declared that he could not practice without.

All of this means that chemotherapy is coming into its own; or does it mean that we have a chemotherapy wave—one that will ride the crest for some years and then give way to something new? We doubt it, since chemotherapy offers so much and the field is yet almost virgin.

As one of those who have been in practice for more than four decades, however, we pause to pay tribute to a list of drugs that we, at least, thought would be with us at all times. Compelling us to become modern is a jolt, but we can take it!

Reprint from The Journal of the Indiana State Medical Association.

MEDICO - LEGAL MEDICINE

IN THE SUPREME COURT OF THE STATE OF ARIZONA

UDALL, Superior Judge:

This is a certiorari proceeding under the Workmen's Compensation Law, Article 9, of Chapter 56, A. C. A. 1939, brought to this court by the Mountain States Telephone and Telegraph Company, a corporation, hereinafter termed the petitioner. It seeks a reversal of an award made August 12, 1943, to Edna S. Mitchell, applicant, for death benefits payable to her for the support of herself and their four minor children then aged 12, 10, 6 and 4 years, respectively. No question is raised as to the amount of the award.

The petitioner-employer was insured with the Industrial Commission of Arizona, as the insurance carrier. Admittedly at the time of the injury both the employee, Mitchell, now deceased, and the employer were subject to the Arizona Workmen's Compensation Law and to the jurisdiction of the Commission. Application for rehearing was denied on September 3, 1943, and within the time allowed by law this proceeding for review was initiated.

There are but two questions raised: (a) Does the evidence in the case support the finding of the Industrial Commission of Arizona that the deceased employee died as a result of carbon tetrachloride poisoning; (b) Did the deceased die *as a result of an accident* arising out of and in the course of his employment within the true meaning of the Workman's Compensation Law of Arizona?

If this court finds the answer to either or both of these questions is in the negative, then the award should be set aside; on the other hand, if the answer to both questions is in the

affirmative the award should be sustained.

A proper determination of these questions requires a close review and analysis of the evidence as well as the application of the statutory law to the peculiar facts of this case.

While there is some conflict in the medical testimony, we state the evidence in its strongest light in favor of the claim of the applicant. The Commission having made an award to her she is entitled to have the evidence thus considered by us.

Clarence Mitchell, for whose death benefits were awarded by the Commission, was a white American, aged 38 years. He had been in the employe of the petitioner for several years, maintaining telephones.

Prior to his last illness, which occurred late in the month of December, 1942, the general health of the deceased was good.

His employment record during the year 1942, based upon a 40-hour week, was nearly perfect. He was absent from work on account of illness only two days during the year.

On or about October 1, 1942, the deceased was assigned to the work of overhauling and repairing telephone switchboards maintained by the petitioner. As a recondition repair man he had worked at various locations prior to December 24, 1942, when he was assigned by the petitioner to service the switchboard at the plant of the Goodyear Aircraft Corporation, at Litchfield Park, Arizona.

In the work that he was doing subsequent to October 1, 1942, the deceased was required to and did use small quantities of carbon tetrachloride at different times and under varying conditions, without any apparent ill effects until he went to work on the switchboard at the Goodyear plant.

Specifically his work involved cleaning the contacts or terminals in the switchboard relays. The space between the contacts in the relays being only 30/1000 of an inch, the usual method of cleaning same was to dip a wooden tooth pick in a small bottle of the carbon tetrachloride and apply the chemical to the points. Ordinarily the actual use of the fluid was not more than five or ten minutes at any one time and it would be so used at intervals of six or seven times a day. The record does not disclose as to what amount or how frequently the deceased used this fluid on the Goodyear job. This work required close application and scrutiny.

The switchboard upon which the deceased was working at Goodyear was then located in a room 12½ x 11½ x 9½ feet, which was walled off from the officers' conference room by plywood. The ventilating system was so installed that it was not possible to ventilate the telephone switchboard room without ventilating the officers' conference room. There were employed in the telephone switchboard room, two telephone operators, a relief operator, and two girls operating the teletype machine, and there frequently were as many as ten people in the room.

The telephone switchboard room was a dark room with no windows. It had two small lattice vents near the floor; there was a trap in one corner which could be opened for an escape in an emergency. There was one door which opened near the machine shop, but by reason of the noise from the machine shop it was necessary to keep the door closed, in order for the switchboard operators to perform their work. The only ventilation in the room came from a ventilator in the ceiling through which heat from the gas furnaces, or cold air could be brought in the room. This was controlled by a switch. When the cold air was turned on, the officers in the conference room, which was amply ventilated, directed that the switch be thrown and the cold air turned of. The telephone switchboard room was always stuffy and as testified to by some of the women operators "it was almost impossible to sit in there, it was choking and suffocating, and practically all of the employees were ill, suffering from colds all winter." In passing it might be noted that the quarters then in use were temporary. Later the exchange was moved to more commodious and better ventilated quarters.

While performing his work at the Goodyear plant, the deceased worked in small, confined quarters, about 2½ feet wide, between the switchboard and the cable terminal box. This space was further confined by the wall at one end and the teletype apparatus located within a few feet of where the deceased was working at the other end. The space where he was working was just barely large enough to admit his body and tool box and to permit him to squat down and sit on a box and do his work.

The telephone switchboard room was illuminated by fluorescent lighting but the deceased required an electric light back of the switchboard to see what he was doing. The light, of course, was productive of heat, as were the generator, batteries and motors located in the cable terminal box.

Carbon tetrachloride is highly volatile and heavier than air. Its tendency is to seek the lower levels of the room. Chemically it very closely resembles chloroform.

When the deceased was working with carbon tetrachloride the odor was prevalent throughout the room, to the extent that the switchboard operators complained of feeling nauseated and ill as a result thereof, and called upon him to stop using it. One of them testified "they hated to see him come to work because we knew we were going to get that odor again." When the operators complained of not feeling well, deceased held the bottle across the switchboard and let them smell the contents and told them

that this stuff he was using was what was making them and him ill.

On December 24, after working with carbon tetrachloride under said conditions, deceased went to Dr. Enfield, the plant doctor, complaining of gastro intestinal discomfort and gaseous indigestion. He was given a prescription for indigestion and when he did not improve, he telephoned Dr. Armbruster, the family physician, and requested him to remain after office hours.

The deceased called on Dr. Armbruster after five p. m. December 24th, and advised the doctor that he had been working with carbon tetrachloride. He complained of the same symptoms mentioned to the plant physician, plus a tight feeling in his chest, some cough, pain in his back and abdomen, and chilliness. He also told him that he had become acutely sick on the job. The doctor made no investigation or examination, accepting the symptoms the patient gave, he gave him a prescription and sent him home.

The deceased was sick all day Christmas. It had been his ambition for years to get the particular kind of job he was doing, and he returned to work at the Goodyear plant on December 28, 29 and 30, on which latter dates he frequently came from behind the switchboard holding his sides and complaining of his chest; and, would sit down holding his side and complaining, "I hurt so bad all over my chest —that stuff in the bottle kind of gets me."

On December 31st, on his way to Doctor Armbruster's office, the deceased collapsed and fell several times. He saw the doctor, complained of the same symptoms he had on December 24th, and some additional ones. He was not hospitalized, due to overcrowded hospital conditions. On his way home the deceased again collapsed and had to be assisted. About nine p. m. January 1, 1943, he was admitted to the Good Samaritan Hospital, with further additional symptoms and died at six a. m., January 2, 1943.

In the death certificate, Dr. Armbruster, based upon an incomplete autopsy report, diagnosed the cause of death as "amyloid leukemia"; and subsequently, after the full report was made, the diagnosis was changed to "poisoning and death caused by carbon tetrachloride."

Dr. Maurice Rosenthal, a graduate of a medical college of Virginia in 1926, with subsequent special studies, training, and experience in pathology, and the resident pathologist at the Good Samaritan Hospital, Phoenix, Arizona, examined and performed an autopsy on the body of decedent on January 2, 1943. He reported his findings and conclusions as: 1. Nephrosis, toxic acute, (a swelling of the kidney); 2. Necrosis of liver, central, (a general deterioration); 3. Subepicardial hemorrhage, (hemorrhage under the pericardium); 4. Edema of brain and brain stem, (a swelling, an increased fluid condition). (Note: The meaning in plain English of the medical terms by the Doctor appear in parenthesis, supra.) The Doctor confirmed his conclusions on cross examination under oath as follows:

> "I said that, * * * * the findings of an acute nephrosis, associated with central necrosis of the liver in an individual who gives a history of having worked with carbon tetrachloride strongly suggests that we are dealing with a case of acute nephrosis and its complications, due to carbon tetrachloride poisoning;"

Dr. Rosenthal further testified:

> "The reason of my opinion was that after performing the autopsy and finding the changes of nephrosis and necrosis of the liver which I have always associated with some acute and rather violent poisoning; that when I was given the additional history of the subject—having worked with this chemical (carbon tetrachloride), I deduced, as is customary in our work, that the subject was most likely, that these changes were most likely the result of the poison he had been working with."

Concerning the time element the doctor testified:

> Q. "And it is your firm opinion that the changes you found in the autopsy and the anatomical condition were produced by this carbon tetrachloride?
>
> A. "It is my firm opinion the changes found could have been produced by carbon tetrachloride.
>
> Q. "And reasonably were?
>
> A. "I think probably they were."

The petitioners seek to have us overthrow the findings of the Commission on some six principal grounds:

(a) That the pathologist did not actually find carbon tetrachloride poison in the body of the deceased when performing the autopsy.

(b) That the testimony of Doctors Armbruster and Rosenthal was conjectural, and that each relied upon the testimony of the other as a basis for his conclusion as to the cause of death.

(c) That other poisons could have caused the same condition found in the body of the deceased by the pathologist.

(d) That certain symptoms of carbon tetrachloride poisoning, such as jaundice and irritation of the eyes, nose, throat and lungs, were not present in this case.

(e) That according to the authorities there was insufficient carbon tetrachloride in the deceased's possession (some four or five ounces in all) to have diffused the liters of space in the known cubical content of this room to such an extent, even if it had all been spilled at once,

to have made the air in the room even highly dangerous, let alone furnish a lethal dose.

(f) That their medical witnesses, Doctors A. M. Tuthill and Norman Ross, both of whom are eminent in their profession, disagreed with the diagnosis as to cause of the deceased's death, of the other doctors called by the applicant. The two doctors named above readily admitted that neither of them were trained pathologists. Their testimony was largely confined to opinion evidence.

We have carefully considered each of these objections and do not consider that any or all of them are fatal to the findings and conclusion of the Commission. In general they merely raise a conflict in the evidence.

We have repeatedly held that if there is any conflict of medical or other testimony, such conflict will be resolved in favor of the findings of the Industrial Commission. Stephens v. Miami Copper Co., et al, 59 Ariz. 528, 130 Pac. (2d) 507; Caekos v. Stanley Fruit Co., 55 Ariz. 72, 98 Pac. (2d) 471.

Every presumption is in favor of the award of the Commission and it is only in cases where there is no reasonable evidence to support its findings that the award will be set aside. We examine this evidence, not as triers of facts, but for the purpose of determining whether the record contains substantial evidence supporting their findings or conclusions.

Another well settled rule in this jurisdiction is that in compensation proceedings, if evidence is such that reasonable inference may be drawn therefrom either way, the Supreme Court must sustain award of the commission. We cite but two of our many cases so holding. Vest v. Phoenix Motor Co., et al, 50 Ariz. 137, 69 Pac. (2d) 795; Young, et al, v. Hodgman and Mac Vicar, et al, 42 Ariz. 370, 26 Pac. (2d) 355.

It is, of course, the law that when an application for death benefits is made, it is incumbent upon the claimant to show affirmatively, to the satisfaction of the Commission, sitting as triers of the fact, (a) that there was an accident arising out of and in the course of employment; and (b) that the deceased was injured thereby, and (c) that the injury was the cause of death; David v. Industrial Commission, 46 Ariz. 169, 49 Pac. (2d) 394.

It would seem to be conclusively established by all of the medical testimony in the case that the deceased came to his death as a result of some toxic substance getting into his system. Furthermore, it was a case of acute and not chronic poisoning. It appears that while findings Nos. 3 and 4, as shown by the pathologist's report, supra, might occur under many circumstances and from various causes, yet findings Nos. 1 and 2 only appear as a result of an acute toxic condition. While the doctors might conjecture as to what particular poisonous substance caused death, the Commission evidently agreed with Dr. Armbruster, the family physician, who said "there was no sense in going into something foreign because Mitchell wasn't using anything but carbon tetrachloride." It also appears from the record that the deceased was probably more susceptible to the effects of carbon tetrachloride than others. Dr. Rosenthal termed this an "idiosyncracies to different drugs". According to the doctors, had the deceased been highly allergic, or had an individual toxicity, to this drug, its first use would have produced prompt fatal results. There is nothing to show that the deceased was aware of his sensitiveness to this substance which he was constantly using.

We hold that there was ample evidence before the Commission to warrant their implied findings that the deceased came to his death as a result of inhaling carbon tetrachloride fumes between the 24th to the 30th day of December, 1942, which occurred in the course of his employment by petitioner.

It is suggested in the briefs that the death of the deceased resulted from an occupational disease and hence was not compensable under our Workmen's Compensation Law. Such a contention is untenable for the reason that, while it is true an occupational disease is not compensable under the Workmen's Compensation Law, such a disease is one which is due wholly to causes and conditions which are normal and constantly present and characteristic of the particular occupation; that is those things which science and industry have not yet learned how to eliminate, such as silicosis or chronic lead poisoning and similar diseases. It is a disease acquired by a slow, gradual process in the ordinary course of employment and as an incident thereto. Industrial Commission v. Roth, 98 Ohio St. 34, 120 N. E. 172; 6 A.L.R. 1463; Ramsay v. Sullivan Mining Co., 51 Ida. 366, 6 Pac. (2d) 856; Ross v. Ross, 184 Okla. 626, 89 Pac. (2d) 338.

More specifically the injury under consideration in this case, wholly fails to meet the requirements laid down in the recently enacted Arizona Occupational Disease Disability Law, Chap. 26, Laws 1943. See also Industrial Commission v. Frohmiller, (Ariz.) 140 Pac. (2d) 219.

It appears that petitioner, and other companies similarly engaged, issue to their recondition repair men carbon tetrachloride in small quantities for use in their work. Other than deceased's fatal experience, injury arising therefrom has been negligible; in fact, no previous instance of injury to those thus engaged in this industry was cited by either party. The record in this case shows that the ordinary use of carbon tetrachloride in this business is not only not fatal but is harmless when properly used. The fatality here involved was undoubtedly caused by the inability of the de-

ceased on the Goodyear job, for the reasons heretofore stated, to comply with the petitioner's instructions given to its employees as to the use of carbon tetrachloride, "to use only in well ventilated places, and to avoid inhaling fumes." Evidently too much is not known about this rare type of poisoning, but it is recognized that the use of carbon tetrachloride is an industrial hazard. Major General H. L. Gilchrist, Chief of the U. S. Chemical Warfare Service states: "We are not yet ready, definitely, to announce the lethal concentration for single exposures". Bulletin 564, U. S. Bureau of Labor Statistics, pages 176-177.

Having concluded that the first question stated at the beginning of this opinion must be answered in the affirmative, we turn now to the more vexatious and perplexing question as to whether the deceased's death was the result of an injury by accident arising out of and in the course of his employment.

Such variable definitions have been given by the appellate courts of the United States to the words "injury by accident", "accidental injury", etc., and the application of such definitions to given cases or states of fact have resulted in such a divergence of concept and interpretation that the decisions cannot be harmonized or brought into unison. This is partly due to a difference in the statutes involved and partly because of a conflict of judicial thought and reasoning. Certainly the writer of this opinion has no intention of undertaking the herculean and impossible task of attempting to reconcile the various decisions.

Most of the states having comparable Workmen's Compensation statutes to Arizona, patterned their law after the Act passed by the British Parliament, and the appellate courts of the great majority of these states, including our neighboring states of New Mexico, Colorado, Utah and Idaho, have adopted and followed the liberal English rule announced by the House of Lords in the leading case of Fenton v. Tharley (1903) A. C. 443. From the jurisdictions adopting this rule numerous cases might be cited that would support the ruling of the Industrial Commission in the instant case. To show this trend we cite but a few typical cases, the facts therein may not be comparable, but the liberal interpretation is unmistakable. McNeely v. Carolina Asbestos Company, 206 N. C. 568, 174 S. E. 500; Webb v. New Mexico Pub. Co., (N. M.) 141 Pac. (2d) 333; Tintic Milling Co. v. Industrial Commission, 60 Utah 14, 206 Pac. 278; U. S. F. & G. Co. v. Industrial Commission, 76 Colo. 241, 230 Pac. 624; Industrial Commission v. Roth, (Ohio) supra; Sullivan Mining Co. v. Ashenbach, 33 Fed. (2d) 1; Tri-State Contractors, Inc., et al v. Althouse, 166 Okla. 296, 27 Pac. (2d) 1041; Dee Memorial Hospital Assn. v. Industrial Commission, (Utah) 138 Pac. (2d) 233.

We have pointed out many times that the Workmen's Compensation Law of Arizona is based in the main upon that of Utah and the Supreme Court of Utah has said that their law was patterned after the Ohio statute. Industrial Commission v. Frohmiller, supra. In our decision in the leading case of Pierce v. Phelps Dodge Corporation, 42 Ariz. 436, 26 Pac. (2d) 1017, we came to a parting of the ways with the Utah court and the other courts following the English rule, on the vital question of the meaning of "injured * * * by accident" and particularly of the word "accident". We there held in effect that there must be some *sudden or instantaneous event or occurrence* which, taken by itself can be recognized as an accident, and, then that the injury must be shown to have followed as a consequence from that specific event. Coupled with this was the implication that there must always be an *external act or* occurrence, usually one of *violence,* which caused the injury or death.

This somewhat restricted and rather narrow rule announced in the *Pierce* case has been praised and followed outside of Arizona in the following cases: Booke v. Workmen's Compensation Bureau, 70 N. D. 714, 297 N. W. 779; Stanton v. Minneapolis Ry. Co., 195 Minn. 457, 263 N. W. 433; Demagalski v. State Industrial Accident Comm., 151 Ore. 251, 47 Pac. (2d) 947.

On the other hand it has been cited and criticized, but not followed, in the following cases: Smith, et al. v. McHan Hardware Co., 56 Ida. 43, 48 Pac. (2d) 1102; McCormick Lumber Co. et al. v. Department of Labor and Industries, et al, 7 Wash. (2d) 40; 108 Pac. (2d) 807; Stevenson v. Lee Moor Contracting Co., 45 N. M. 354, 115 Pac. (2d) 342; Webb v. New Mexico Publishing Co. (N. M.) 141 Pac. (2d) 333; Christensen v. Dysart, et al. 42 N. M. 107, 76 Pac. (2d) 1; Meyer v. Reettele, 64 S. D. 36, 264 N. W. 191; Lumberman's Mutual Casualty Co. v. Griggs, 190 Ga. 200, 9 S. E. (2d) 84.

Our holding in the *Pierce* case is, however, the law in Arizona, unless we see fit to overrule or modify the same. But it requires no citation of authority for the proposition that this court is not bound by its former decisions, unless the declaration of principles in such former adjudicated cases commend themselves by their essential soundness.

Petitioners urge that the award made in this case can not stand if we strictly adhere to the accident rule laid down in the *Pierce* case. This is doubtless true. While we agree that a correct ultimate conclusion was reached in disposing of the *Pierce* case, under the facts there shown yet we now feel that probably too little weight was given to the peculiar and appropriate meaning in the law (Sec. 1-103, sub. 1, A.C.A. 1939) of the phrases such as "injured —by accident" and "accident" appearing in

our compensation law, which phrases had a well defined and well understood meaning at the time of the enactment of our Workmen's Compensation Act.

Furthermore it appears that in the *Pierce* case we did not discuss or consider, probably because it was not called to our attention, the phrasing of the Constitutional mandate to enact a Workmen's Compensation law. Certainly the legislative intent can best be gleaned by reference to Section 8, Article 18 of the Arizona Constitution, which provides that "compensation shall be - - - paid - - - if in the course of such employment personal injury to or death of any such workman from any accident arising out of, and in the course of, such employment, *is caused in whole, or in part, or is contributed to,* by a necessary risk or danger of such employment, or a necessary risk or danger inherent in the nature thereof - - - ".

It will be noted that the italicised part of the Constitution just quoted is broader and more comprehensive than the legislative enactment appearing under Section 56-936, A.C.A. 1939. A construction of the latter must be governed by the constitutional provision.

Applying these principles to the instant case it is readily apparent that the poisoning of the deceased, which caused his death, was "caused in whole, or in part, or was contributed to, by a necessary risk or danger of such employment".

While accidental injuries are usually sudden happenings and are caused by some violent or external means such as a traumatic injury, not all accidents fall into such a mold, or such a straight-jacketed pattern. There is nothing in our statutory law, Sec. 56-931, (formerly Sec. 1421 R. C. 1928) that says that an industrial accident must be an instantaneous happening or that violence need be a part thereof in order for a resulting injury to be ocmpensable.

In the exceptional cases, such as the one now under review, the injury suffered was unquestionably accidental, though the precise time of the beginning may have been uncertain. An injury may be gradual and progressive and not immediately discoverable. Here the poisonous effect was undoubtedly cumulative over the short period of time that the deceased was working at the Goodyear plant. The conditions under which the deceased was working were unusual and abnormal for the class of work he was doing. He was in a confined space, in an inadequately ventilated room, with a highly volatile, poisonous chemical, which should only have been used in a well ventilated room. He breathed the fumes and was poisoned.

We know that the employer did not wilfully maintain the conditions there found to exist, or intentionally cause the poisoning and death. The deceased, although he apparently recognized that the fumes were dangerous, and returned to work in disregard of the doctor's order, cannot be charged with deliberately committing suicide. No one expected, anticipated or looked for the poisoning and death to deceased. The result was undesigned and unexpected. It was therefore an event which took place without one's foresight or expectation, and hence a fortuitous happening.

We know that the employer did not wilfully said in the Pierce case to the contrary notwithstanding, that there was an injury by accident in this case within the meaning of the Arizona Law, as now interpreted, in that the inhalation by the deceased of the fumes from the use of the poisonous carbon tetrachloride, under the circumstances heretofore stated, produced effects that were not intended, foreseen or expected. This was an unlooked for mishap, an unexpected, unusual and extraordinary event not reasonably contemplated as a part of normal conditions of employment.

In making this ruling we disavow, in advance, any intention of letting down all the bars in these Industrial cases; we have here removed only those bars which prevented justice being done in this case under a common-sense interpretation of the constitution and statutory law of this State. The provisions of the Workmen's Compensaion Act are remedial in character and should be construed liberally in favor of the workmen. Ocean Acc. & Guar. Corp. v. Industrial Commission, 32 Ariz. 265, 257 Pac. 641; Butler v. Industrial Commission 50 Ariz. 516, 73 Pac. (2d) 703. The fund is created to protect the workman; but it is limited to injuries by accident arising out of and in the course of the employment. It is not a health or accident insurance fund. The deceased was an industrial casualty, and his dependents are entitled to death benefits. We confine ourselves to a determination of the law as applied to the facts shown in this case.

Award affirmed.

SAN FRANCISCO HEART COMMITTEE

Dr. Chester S. Keefer of Boston will be one of the speakers at the San Francisco Heart Committee's Fifteenth Annual Postgraduate Symposium on Heart Disease which will be held this year October 26, 27, and 28. Other guest speakers will be Dr. Maxwell M. Wintrobe, Professor of Medicine, Utah University Medical School; Dr. S. J. McLendon of San Diego, Dr. William Gordon of the United States Public Health Service, and others to be announced later. More than twenty San Francisco physicians especially interested in cardiovascular disease will participate in the Symposium. Rheumatic fever will receive special emphasis this year.

The sessions will open Thursday, October 26 at the University of California School of Medicine. The program for Friday, October 27 will be presented at Stanford University School of Medicine and at the San Francisco Hospital. A dinner meeting has been arranged for the evening of the 27th at the St. Francis Hotel. Saturday morning's pro-

(Continued on Page 296)

ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

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PRESIDENT'S MESSAGE

The summer has been given over to vacations for the most part. We are pleased to announee that committee personnel are now complete, the roster appearing in the ORGANIZATION SECTION of each issue of this *Journal*. You are familiar by now with the By-law provisions for setting up committees under the headings of SCIENTIFIC and NON-SCIENTIFIC. One of the best features of committee organization is that a member takes appointment for a term of three years, so that there are two experienced hold-over members eaeh year and one new member, as personnel is set at a membership of three exeept in two or three instances. Due to so many of our members going into service, we have experienced a little diffieulty in securing permanent committee personnel. It appears at present as if the Assoeiation now has a full staff of committees with personnel that will be on the job for the full tenure of office.

We ask that you look over the list of eommittees, note the title of each whieh indicates its scope of work, then lay before eaeh one any medical problem in your community that you

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feel needs the direct attention of the committee. If you have any problem on Industrial Health, Social Diseases, Tuberculosis, Crippled Children, Maternal and Child Health, or others of scientific nature, you will note that the Association has a committee to aid in working out a solution. The same applies to Non-Scientific matters such as Medical Economics, Public Health, State Health Relations and the like. The Committee on State Health Relations, for example, is to assist the various state institutions such as the State Hospial, Boys' Industrial School, Pioneers' Home, State Prison, School for the Blind and the like, in their medical problems. The Governor has said that he plans to call on this committee frequently for such aid as it may give in institutional medical problems. Dr. F. W. Butler of Safford has recently been appointed by the Governor to serve a five year term on the State Board for Juvenile Insitutions, this board directs the activities of institutions caring for delinquent boys and girls of the state. Dr. Butler was selected from the list provided the Governor, in conformance with the law, the Council approving the list of three names submitted for consideration.

The Association committees are all active as each has a specific job of work to do. Your society will hear from each committee during the course of its activities and you are urged to respond to any requests committee may make for society participation and endorsement. The Council approves all committee programs before they are put into action. The Committee on Scientific Education and Post Graduate Activities, now that we have a complete personnel once again, will draft its program in the near future and give the societies something definite to promote for scientific study and advancement.

This issue of the *Journal* also carries a roster of the association membership. While we have lost a considerable number to the armed forces, we have also picked up new members from among those coming into the state to locate. We are a small association, numerically, but an active one in that our component societies and members are always interested and active in state and national organization work.

DAN L. MAHONEY, M. D.,
President.

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Scientific Program

A GROUP OF INSTRUCTORS FROM BAYLOR UNIVERSITY (Texas) WILL PRESENT THE COMPLETE SCIENTIFIC PROGRAM. Details of the program will soon be ready for publication.

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Condon, D. J.
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Creighton, Carol C.
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Noon, Z. B.
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Clinical Pathological Conferences

GOOD SAMARITAN HOSPITAL CASE—JULY, 1944

Patient was a 45-year-old white male, who was admitted on February 6, 1944, complaining of generalized neuritic and arthritic pains of threre months' duration. He also complained of generalized weakness, loss of weight and a slight impairment of vision during the last several months. He had been apparently well until four years ago when he had an attack of acute pain in the left leg, which was said to be due to phlebitis. A short time after that, he developed pain in the right leg and hip, which was similarly diagnosed. An x-ray at this time revealed a bone tumor of the right femur. A diagnosis of primary bone tumor was made at the Mayo Clinic, for which he was treated. A year before admission to this hospital, patient began to complani of pain in the right shoulder and arm. This pain was transient and migratory in character. For the past two months the patient had complained of a constant numbness of the lower lip and chin. During the past three or four weeks, he had a low grade, intermittent fever. His general course was down-hill, with loss of weight and strength.

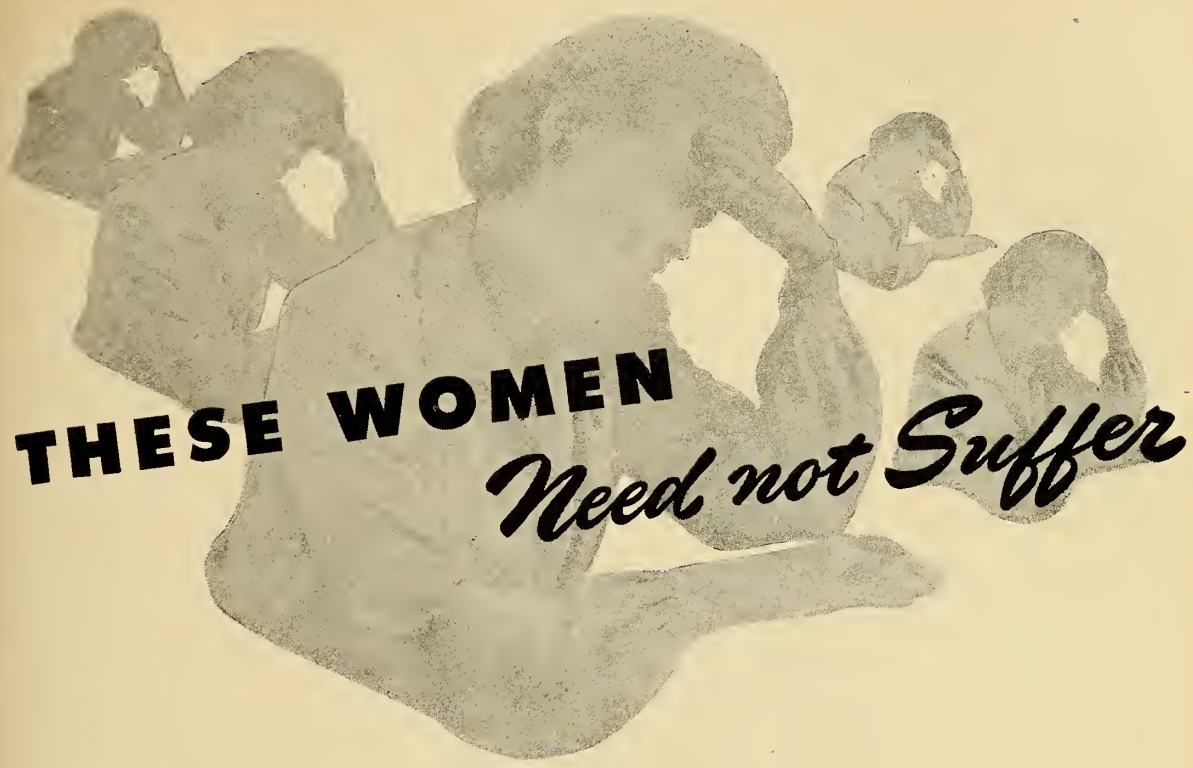
Physical examination revealed a large frame, robust type of subject who was over-weight and presented a plethoric facies. There was a slight droopiness of both eyelids. The pupils were dilated and fixed. The eye grounds showed no pathological changes of significance at the first examination. The teeth were in a good state of preservation, and showed nothing of clinical significance. The chest presented a barrel-shaped thorax. The lung fields were essentially negative. The heart showed nothing of significance. The abdomen revealed no masses or areas of tenderness. The extremities were essentially normal ,except for an old 4-inch scar in the mid portion of the right thigh. The neurological examination presented: 1. Suggestive drooping of eyelids; 2. Dilated, fixed pupils, left larger than right, definite impairment vision left eye; 3. Paresthesthesia of the anterior mandibular region; 4. Tendon reflexes were depressed and somewhat erratic; 5. Abdominal and cremasteric reflexes were absent.

Laboratory Data

Routine agglutinations were negative. Spinal puncture revealed a normal pressure, with clear fluid; microscopic examination was negative; Pandy's was positive. Stool examination was negative for ova, cysts and parasites. Culture was negative for pathogenic organisms. Blood serology and spinal fluid serology was negative. Non-protein nitrogen was 28; sugar was 75. Red blood count wasc 4,610,000; leukocytes, 15,600; hemoglobin, 13.8 grams. Differential count was normal. The urine showed a specific gravity of 1015, and a faint trace of albumin; there were two or three white blood cells per high power field, and a few finely granular casts. Sedimentation rate was 27 mm. at the end of an hour by the Cutler method. X-ray examination of the sella tursica showed no evidence of increase in size or other abnormality. X-ray examination of the gallbladder showed a non-functioning gallbladder. There were no visible metastatic bone lesions in areas investigated by x-ray examination.

Progress

Several weeks before he expired, patient was given an eye examination which revealed a retinal separation involving the outer half of the retina of the left eye. There was no evidence of vision in this eye. About two weeks before he died, patient became markedly jaundiced.



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BUY AN EXTRA WAR BOND . . . — FOR VICTORY

The patient continued a gradual down-hill course, and expired several weeks after his second admission to the hospital.

DR. W. W. WATKINS: This patient was first seen on Feb. 1, 1940, being referred by Dr. Greer with the history that patient had just returned from the Mayo Clinic, where some type of bone tumor involving the right femur had been explored and a diagnosis of bone sarcoma made. Dr. Watkins' report was that a destructive medullary bone lesion was shown, which has eroded the cortex, but the x-ray appearances were not conclusive as to whether this is osteogenic sarcoma or Ewing tumor, and further data from the Mayo Clinic was secured.

The previous history given by Dr. Greer was that this man and his family had been his patients for years, but Dr. Greer was not consulted about the so-called "rheumatism" in this thigh which developed in the Fall of 1939. This man consulted another doctor in Phoenix and was treated by him for two or three months, no x-ray films being made. Patient then went to Mayo Clinic, on his own initiative, where x-ray films were made, bone tumor found and this was explored, a specimen being taken for biopsy. The pathological report was grade 4 hemangio-endothelioma or Ewing sarcoma. Since this growth has a very serious prognosis, but is radiosensitive, x-ray therapy usually gives as good results as surgery. He was therefore advised to have x-ray therapy, one series being given at the Mayo Clinic with advice to have this treatment continued in Phoenix. His treatments were completed at the Clinic about Jan. 25th.

Patient started the second series at Pathological Laboratory on Feb. 25, 1940, using somewhat higher voltage than was given at the Mayo Clinic.

Film of 2/2/40 shows the amount of bone destruction at that time.

Series of treatments were completed March 4, 1940. These produced a very satisfactory skin reaction.

Film of 5/4/40 shows a very satisfactory healing of this lesion. Patient was advised to have a short series of treatments once a month so as to maintain effect over a prolonged period of time. Such series were given in May, June and July, each of these series consisting of three reactions,—of 400 r each, or 1200 r for each series.

Film of 8/20/40 showed still further favorable change, although the soft tissue reaction was severe, consisting of a persistent edema which gradually changed to a contraction ring like a wide band about the thigh.

Film of 1/7/41 showed still further evidence of healing, with a small periosteal proliferation area where biopsy specimen had been removed.

In Nov., 1941, patient was seen by Dr. Merrill, the complaint being pain in back and a small tumor in the calf of right leg. Extensive x-ray survey was carried out without demonstrable evidence of bone lesions. A copy of our records and the x-ray films were sent to Mayo's for their advice. They agreed that visible bone metastases were not shown, but suspected that metastases might be taking place in soft tissues; since these were not sufficiently localized for x-ray therapy, they advised sending patient to Dr. Lawrence at Berkeley for treatment with irradiated phosphorus. The records were submitted to Dr. Lawrence, who did not recommend irradiated phosphorus for him. He wrote that all that could be expected had been accomplished in this case. Dr. Lawrence was very complimentary about the radiation technic used, and thought treatment with irradiated phosphorus would not add anything to this. He was of the opinion, as we had been and as the Mayo Clinic observers were when they refused to operate, that the opportunity to cure this radiosensitive tumor was lost by the delay in the outset, when months were wasted in treataing this condition as "rheumatism". Dr. Lawrence thought that metastases which had already been planted at distant points, before any treatment was given, would eventually develop. That proved to be true.

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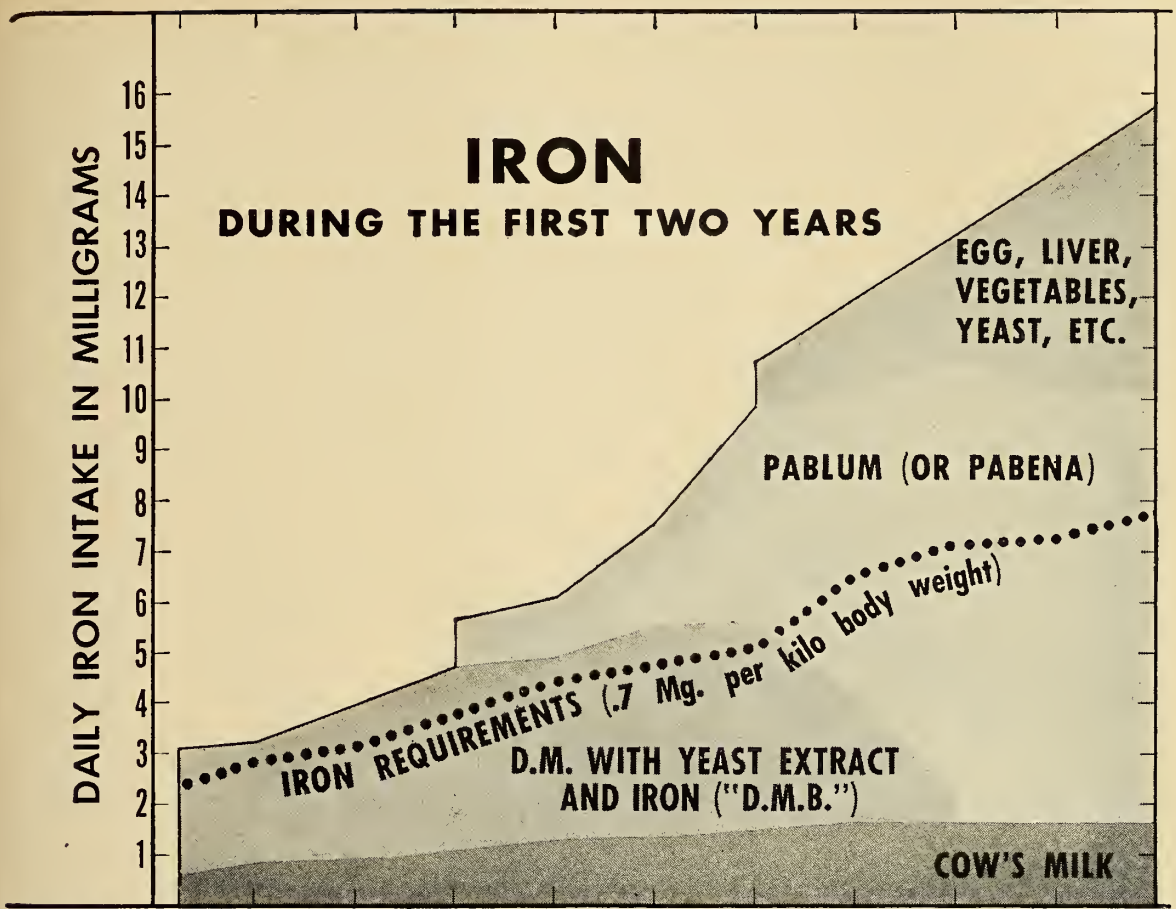
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WEIGHT, Lbs.	7	9	10	12	14	15	16	19	22	23	25
MILK, Oz.	10	16	18	21	24	26	28	32	32	32	32
"D.M.B.," Oz.	1	1	1¼	1½	1½	1¾	1¾	1	¼	0	0
PABLUM, Oz.	0	0	0	⅛	¼	¼	½	¾	1	1	1

IRON DURING THE FIRST TWO YEARS

During fetal life iron accumulates (in the form of hemoglobin) in the infant's body. After birth the hemoglobin frequently drops to 50% by the third month, especially in prematures. Neither breast milk nor cow's milk is capable of offsetting this loss, as they are deficient in iron. This chart shows that when the carbohydrate and cereal supplements contain iron, a sizeable margin of safety over the requirements can be maintained, not only during the important first six months, but throughout the first two years of life.

More iron than the calculated requirement is needed because some iron is not utilized. In rapidly growing, or poorly nourished infants, and in the presence of infection, the need for iron may be even greater than is indicated in this chart for normal infants.

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1943, x-ray examinations were made for Dr. Frissell. The lesion at the original site showed no further development, and in Nov., 1943, there was no x-ray evidence of lung metastases.

On 1/3/44, a skull examination was made for Dr. Saxe, who was under the impression that patient had myeloma. No bone changes were found in the skull.

A final survey of the gastro-intestinal tract and of several bond areas was made in this hospital in February, for Dr. Frissell, but no bony abnormalities were found other than in the right thigh.

The concensus of opinion during the general discussion was that this patient had a malignancy with general metastases throughout the body. The primary site of the malignancy was not decided upon.

Pathologist's Report

DR. MAURICE ROSENTHAL:—The body was that of a moderately well developed and nourished white male, approximately 50 years of age. The head was normal in shape and contour. The scalp was covered with light brownish, graying hair. There was no discharge from the nose, ears nor mouth. The eyelids and mouth were closed as a result of the embalming process. The mucous membranes were pale. There was no enlargement of the cervical, axillary and inguinal lymph nodes. There was a pitting edema of the ankles and lower extremities. There were no other abnormalities of the upper or lower extremities.

"Y"-shaped incision was made through the skin of the thorax and abdomen. The subcutaneous fat measured from ½ to 1 inch in thickness.

Upon entering the peritoneal cavity, the organs were found to be in their proper positions and relationships. The liver extended for a distance of three finger breadths below the costal margin in the mid-clavicular line. Upon removing the thoracic plate, string-like pleural adhesions were found between both upper lobes and the thoracic cage. There was no fluid in the pleural cavity. The organs were in their proper positions and relationships. The thoracic, abdominal and pelvic organs were removed, entoto.

The interior vena cava was normal, and contained no thrombi nor emboli. The aorta was stripped from its retroperitoneal attachment. The esophageal mucosa revealed several plaques of leukoplakia and a moderate degree of congestion.

The lungs, on sectioning, revealed a moderate degree of passive congestion and emphysema. Both lower lobes showed a slightly increased degree of passive congestion. No areas of lobular consolidation could be seen or palpated, grossly.

The heart was normal in size, shape, and in consistency. The myocardium of both ventricles was normal, and all of the cardiac valves were essentially normal. The coronary ostea were patent, as were the coronary vessels. The aorta was elastic, and revealed only a few small, yellow, atheromatous plaques along the descending aorta.

Upon sectioning, the liver resembled a chronic passive congestion, and upon pressure an increased quantity of bile-stained material exuded from the cut surface.

The gallbladder was distended, as were the extra hepatic bile passages.

The pancreas was unusually hard and firm in consistency, and presented small focal, yellowish-gray nodules of infiltration. These were found in the head and body of the organ. The head was enlarged as a result of this process, and produced an obstruction of the common bile duct in the region of the papillae.

The spleen was slightly increased in size. The capsule was slightly thickened, and the cut surface showed no unusual gross pathological changes.

The adrenals were normal on cross sectioning.

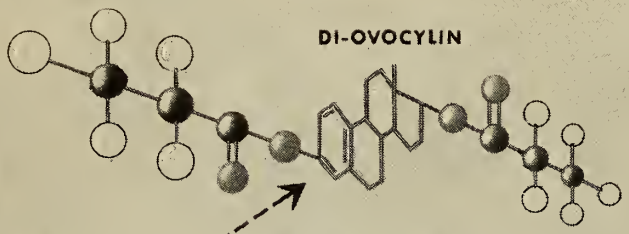
Both kidneys were enormously increased in size, and infiltratted by large round, yellowish-gray tumor masses, measuring 2 to 3 cm. in diameter. A few areas of normal kidney parenchyma were still discernible. The calices and pelvis were slightly dilated. The ureters were normal.

The bladder showed a moderate congestion of the mucosa.

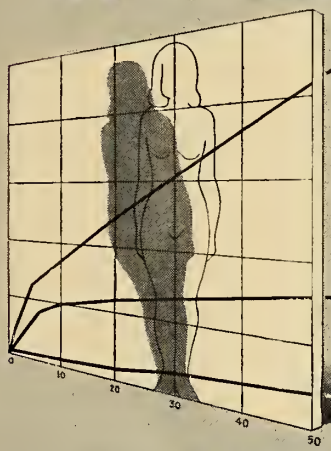
The prostate was slightly increased in size, but unusually firm and hard in consistency. The cut surface presented a light yellowish-gray tumor of infiltration.

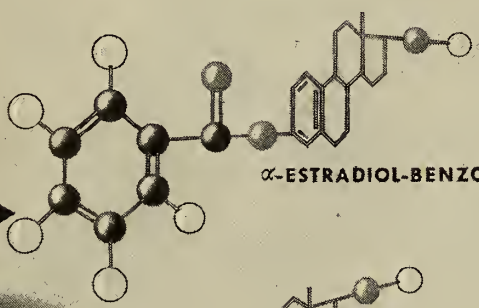
Upon examining the stomach, in the fundus and in the prepyloric region irregular-shaped broad masses of yellowish-gray tissue infiltrated and submucosa. These measured from 3 to 4 cm. in width and 5 to 8 cm. in length. There were no superficial ulcerations of the mucosa. The pylorus was normal, and the remaining gastro-intestinal tract showed only a moderate degree of congestion of the mucosa.

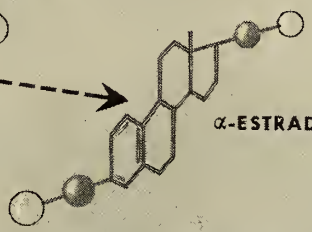
The scalp was incised from ear to ear and reflected backwards and forwards. Examination of the brain was limited to an occipital removal of the cranium. However, the calvarium was removed, and the dura appeared to be slightly thickened, but showed no other gross changes of pathological significance. The convolutions of the brain were normal in size and shape, and the subarachnoid space showed a slight excess of yellowish fluid. There were no areas of tumor infiltration in the meninges or cortex. Examination of the cerberal hemispheres showed no gross changes of pathological significance, nor did sectioning of the cerebellum reveal any changes of pathological significance. Sections through the pons, medulla



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annd upper cervical eord revealed a few scattered areas of what appeared to be focal areas of degeneration. This may have been, however, only a focal edema. Sections through these areas were taken for microscopic study. The sympathetic ganglia along the cervical, thoracic and abdominal regions were examined, and the upper thoracic ganglia appeared to be increased in size, firm in consistency, and fibrous-like in appearance. Several of these were taken for microscopic study.

Several of the ribs showed irregular areas of increased density, apparently due to some infiltration. A section of rib was taken for microscopic study.

Microscopic

Sections through the prostate reveal focal proliferations of gland acini characteristic of an adenomatous hypertrophy of the prostate. In some of the sections, however, there is a diffuse cellular infiltration which is characterized by pleomorphism. With oil immersion, the cellular structure is seen comrised of endothelial cells, plasma cells, neutrophils and many erythroblasts. The erythroblastic series is quite prominent. The cells in many places are megaloblastic in character, and show mitosis. The cells are separated by a scant amount of eosinophilic-staining material. The general histologic characteristics are those of a mixed cell myeloma.

Sections through the kidneys show that the parenchyma has been replaced in many places by a cellular infiltration similar to that described above. The tubular epithelium shows degenerative changes. The interstitial vessels are congested, and the glomeruli and also infiltrated by similar tumor cells, and show degeneration and necrosis.

The capsule of the abrenal is also infiltrated by similar tumor cells. The cells of the cortex show degeneration.

Sections through the spleen reveal that the sinusoids are markedly dilated. There is a decrease of the lymphoid elements, and the pulp is infiltrated with numerous polymclear cells and plasma cells.

The pancreas is also infiltrated by islands of tumor cells similar to those described above.

The liver shows marked cloudy swelling of the hepatic cells. Many of them show disintegration. The portal fields show a moderate infiltration with lymphocytes and plasma cells. Some of the hepatic cells show a fatty degeneration.

Sections through the lung show that the pleura is thickened as a result of a cellular infiltration comprised of tumor cells similar to those described above. The pleura is also edematous, and the vessels are congested. The pulmonary tissue adjoining the pleura is also infiltrated by tumor cells. The adjoining alveolar spaces

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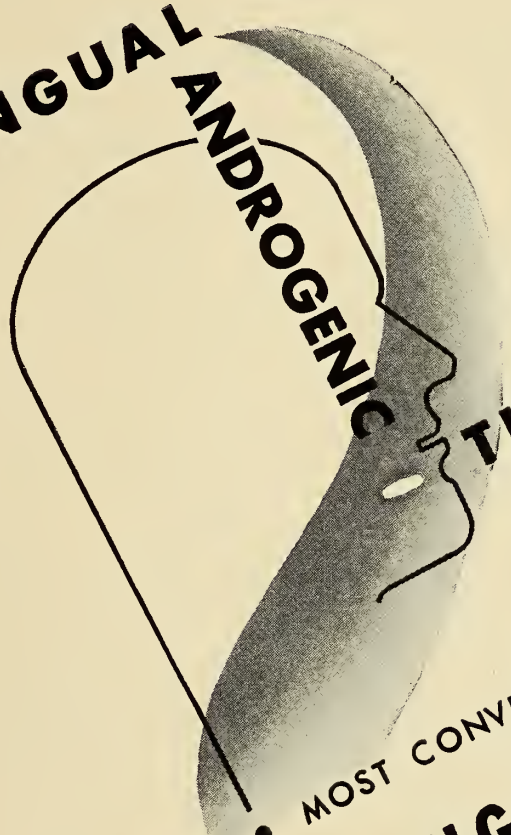
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[1]Biskind, G. R.: Proc. Soc. Exper. Biol. & Med. 43:259, 1940. Burrill, M. W. and Greene, R. R.: Endo. 31:73, 1942.

[2]Lisser, H. and Curtis, L. E.: J. Clin. Endo. 3:389, 1943. *Trade Mark Reg. U. S. Pat. Off.

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show that the capillaries are markedly congested. The infiltrations in the lung are focally distributed.

Sections through the wall of the stomach also reveal that the normal mucosa has been markedly infiltrated by similar tumor cells. The submucosa and muscularis are also infiltrated by islands of tumor cells. There is considerable edema and degeneration of the fibro-muscular elements. There is degeneration and necrosis of the epithelial cells.

The anterior lobe of the pituitary gland shows a cellular infiltration of the stroma with myeloid cells. There is degeneration and necrosis of some of the neighboring epithelial cells.

Sections through the pons, medulla and upper cervical cord show a slight cellular infiltration of tumor cells within dilated, perivascular lymph spaces. The nerve cells show degeneration. The reticular meshwork is widened, due to edema. The sympathetic ganglia show degeneration of the ganglion cells. No tumor infiltrations are found in the ganglia.

Anatomical Diagnosis

1. Carcinoma of prostate.
2. Carcinoma, metastatic, to pancreas, stomach, ribs and kidneys.
3. Emphysema, pulmonary.
4. Pleuritis, adhesive, chronic.
5. Obstruction of common bile duct.
6. Chronic inflammatory reaction of parasympathetic ganglia (?).
7. Degeneration of brain stem (?).

Histological Diagnosis

Myeloma, mixed cell type, with metastasis to prostate, pancreas, stomach, kidneys, brain stem and pituitary.

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CANCER PROJECT

At the convention of the Women's Auxiliary to the Arizona State Medical Association in June, 1944, a motion was made to endorse a project to further the educational program of the Arizona Society for the Control of Cancer The first step toward organizing the state of Arizona in behalf of the Society for the Control of Cancer was made by Mrs. James H. Allen, president of the Women's Auxiliary to the Arizona State Medical Association. Mrs. Allen invited the Regional Commander of the American Society for the Control of Cancer to address a group of women at a luncheon held at Prescott, Arizona, Wednesday, September 6, 1944. At this meeting Mrs. Emily G Bogert, the Regional Commander, gave an address, a review of which follows this report.

At the close of the address at a short business meeting Mrs. Thomas A. Hartgraves was elected State Commander of the Arizona Society for the Control of Cancer. The following Auxiliary members have been appointed on the organization board: First Vice Commander, Mrs. James H. Al-Beck, Phoenix; Mrs. Ernest A. Born, Northern len, Prescott; Second Vice Commander Mrs L. D. District Commander, Prescott; Central District Commander, Mrs Maurice Rosentha, Phoenix, and Southern District Commander, Mrs. Edward M. Hayden, Tucson.

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REVIEW OF ADDRESS

Mrs. Emily G. Bogert of Denver, Colorado, Regional Commander of the American Cancer Soci-

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*Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154. Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60. Proc. Soc. Exp. Biol. and Med., 1934, 32, 241. N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.

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ety, was in Arizona the week of September 6, 1944 in the interests of organizing a State Cancer Society and in planning for an inter-organization educational program in cancer control.

In presenting cancer as a major health problem in the United States, Mrs. Bogert stated that one out of every nine deaths in the United States is attributed to cancer—that each year in the United States 160,000 people die of cancer.

There are from 600,000 to 800,000 cases of cancer each year. Cancer is not a hopeless disease. Over 36,000 cures are on file with the American College of Surgeons. Only "late" cases of cancer become incurable because of neglect or delay or lack of proper ethical treatment. The cancer control program offers hope through education of symptoms which may lead to cancer and through stressing the importance of regular complete physical examinations.

Mrs. Bogert further stated "All of us who are wrestling with the problem of saving lives through educating the publicc are aware of the complexity and difficulty in the job we have undertaken. If through united interorganization cooperation we can arouse the public to an awareness of the precancerous period—if we can teach the public that these precancerous lesions may lead to cancer if not carefully observed, we shall go far."

The Cancer Control program is under the supervision of the American Cancer Society and has the approval of the American Medical Association and Public Health Service. Its program is based on science, application of science and education.

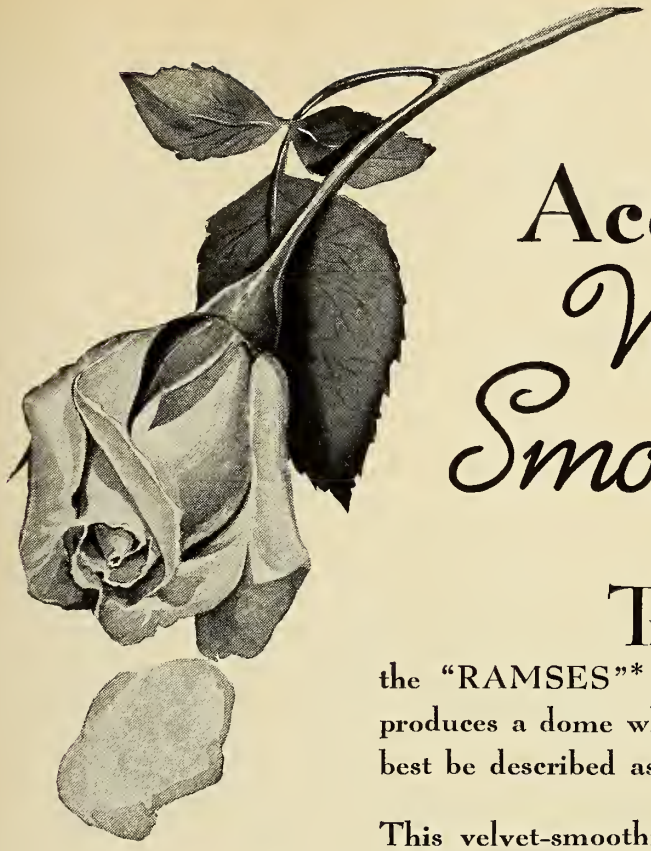
The slogan of the Society is "Early Cancer Is Curable. Fight it with Knowledge."

Book Reviews

"POLIOMYELITIS." The Reletion of Neurotropic Streptococci to Epidemic and Experimental Poliomyelitis and Poliomyelitis Virus, Diagnostic Serologic Tests and Serum Treatment, by Edward C. Rosenow, M. D., Professor of Experimental Bacteriology, University of Minnesota, Mayo Foundation, Rochester, Minnesota. Published by The International Bulletin, Volume A-44, 319 West 103rd Street, New York City.

According to the Foreword, this volume of The International Bulletin is the first to be given over entirely to the work of one author. Presented here is the Monograph of Dr. E. C. Rosenow covering the twenty-seven years of researrch an the streptococcic etiology of poliomyelitis. In the Preface Dr. Rosenow says, "This monograph, I believe, summarizes my work and will meet the objections that have stood in the way of a general acceptance of the primary streptococcal causation of poliomyelitis and the streptococcal source of the virus."

The text deals in detail with the immense amount of work Dr. Rosenow has put into his subject, much of which has been hitherto unpublished. He described in detail technics and results of his numerous experiments covering various phases of the problem such as:



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2. Finding of diplococci and streptococci in the lesions of the brain and spinal cord in epidemic and experimental poliomyelitis.

3. Microdiplococci in filtrates of poliomyelitis virus.

4. Specificity of the streptococcus as shown by inoculation of animals, cataphoresis, agglutination tests, and precipitin reactions.

5. Poliomyelitic streptococcal antigen in the serum of persons and monkeys during attacks of poliomyelitis.

6. Streptococcal cutaneous tests for susceptibility to poliomyelitis and a cutaneous test diagnostic of specific streptococcal infection in poliomyelitis and other diseases.

7. Precipitation and cutaneous reactions as measures of streptococcal antigen.

8. The protection of monkeys against experimental poliomyelitis with vaccine and antiserum prepared with the streptococcus, and the treatment of epidemic poliomyelitis with the poliomyelitic antistreptococcic serum.

9. Experimental production of a filtrable transmissible agent from neurotropic streptococci.

This partial list shonld give the reader some idea of the htoroughness of Dr. Rosenow's work and its presentation. Every physician or worker who has to deal with poliomyelitis should avail himself of this contribution to the growing store of knowledge concerning the disease. Those who are inclined to be skeptical owe it to themselves and to Dr. Rosenow to read this presentation. R. L. F.

"METASTASES—Medical and Surgical," by Malford W. Thewlis, M. D., Attending Specialist in General Medicine; United States Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, Rhode Island; Special Consultant, Rhode Island Department Public Health, Author Care of the Aged (Geriatrics), Preclinical Medicine.

Foreword by Hubert A. Royster, A.B., M.D., F.A.C.S., Honorary Chief Surgical Service, Rex Hospital; Chief-of-Staff, St. Agnes Hospital; Consulting Surgeon, Dix Hill State Hospital; Fellow American Board of Surgery, Raleigh.

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(Continued from page 273)

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1. Fauley, G. B., Freeman, S., Ivy, A. C., Atkinson, A. J. and Wigodsky, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med., 67:563-578 (Mar.) 1941.
2. Cornell, A., Hollander, F. and Winkelstein, A.: The Efficacy of the Drip Method in the Reduction of Gastric Acidity. Am. J. Digest. Dis., 9:332-338 (Oct.) 1942.
3. Winkelstein, A., Cornell, A. and Hollander, F.: Intragastric Drip Therapy for Peptic Ulcer; Summary of 10 Years' Experience, J.A.M.A., 120:743-745 (Nov. 7) 1942.
4. Upham, R., and Chaikin, N. W.: A Clinical Investigation of Aluminum Phosphate Gel, Rev. of Gastroenterol., 10:287-297 (Nov.-Dec.) 1943.
5. Lichstein, J., Simkins, S. and Bernstein, M.: Aluminum Phosphate Gel in the Treatment of Peptic Ulcer. Am. J. Digest. Dis. In Press.



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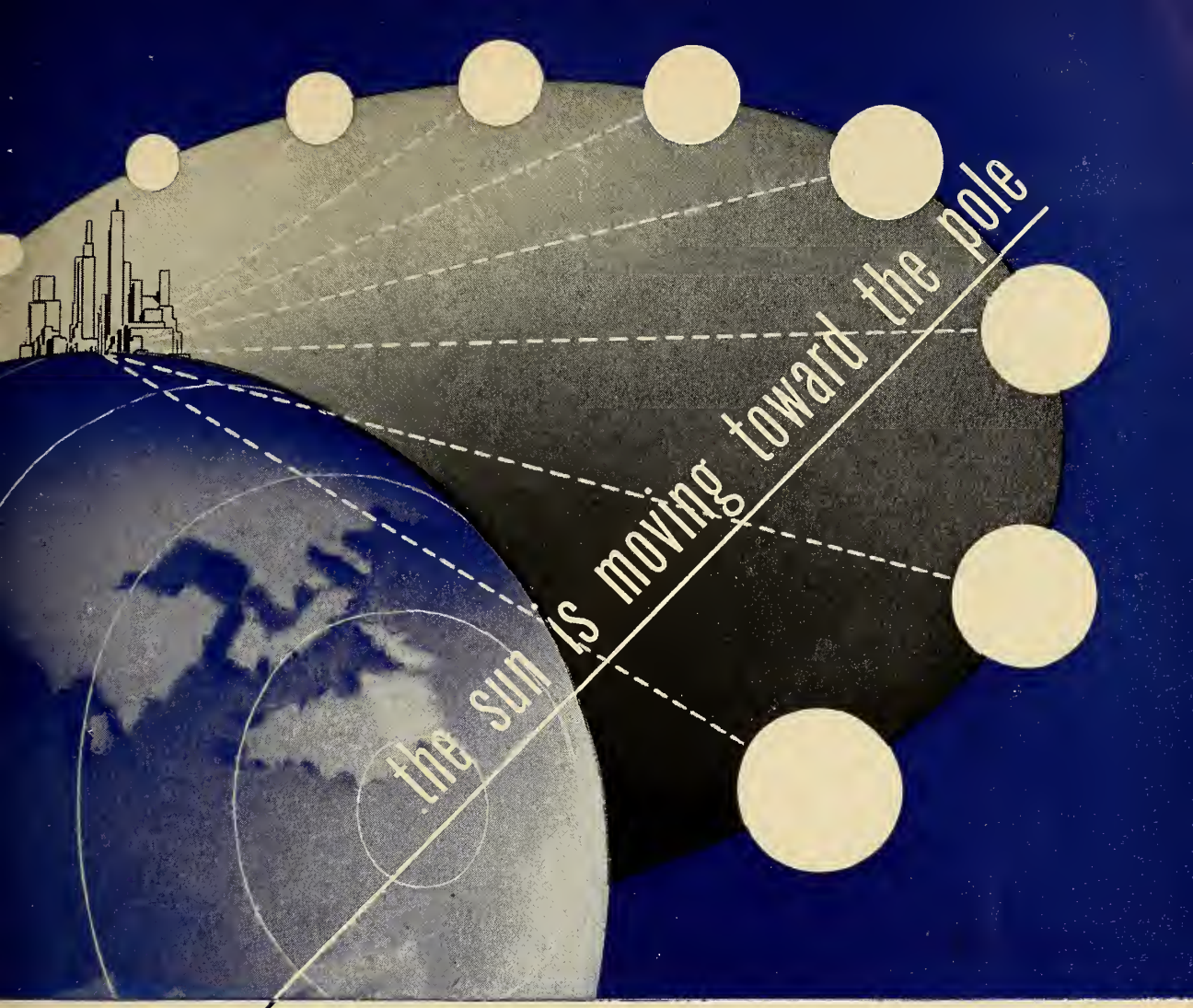


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*Youmans, J. B.: Nutritional Deficiencies, Lippincott, New York, 1941.

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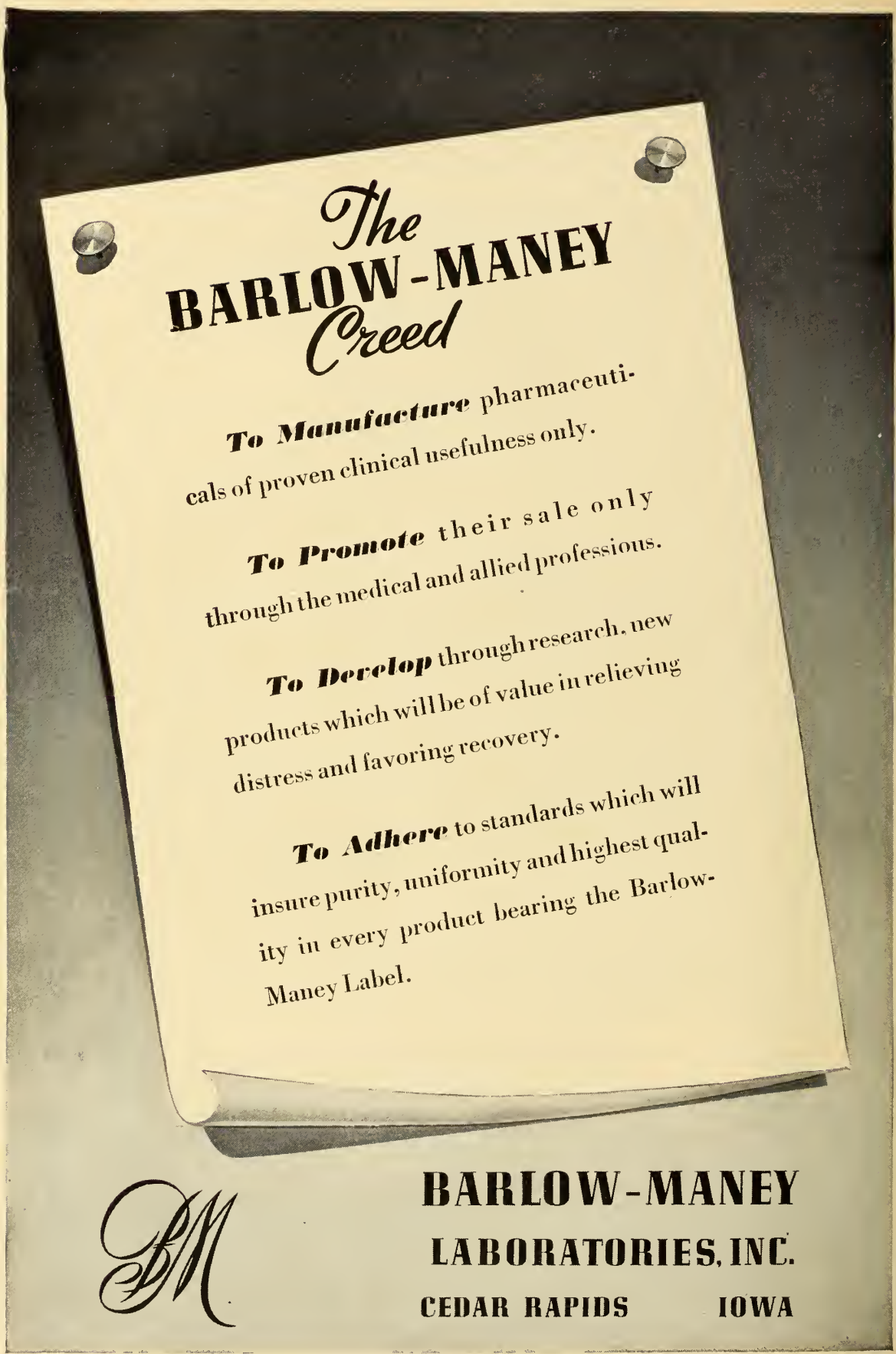
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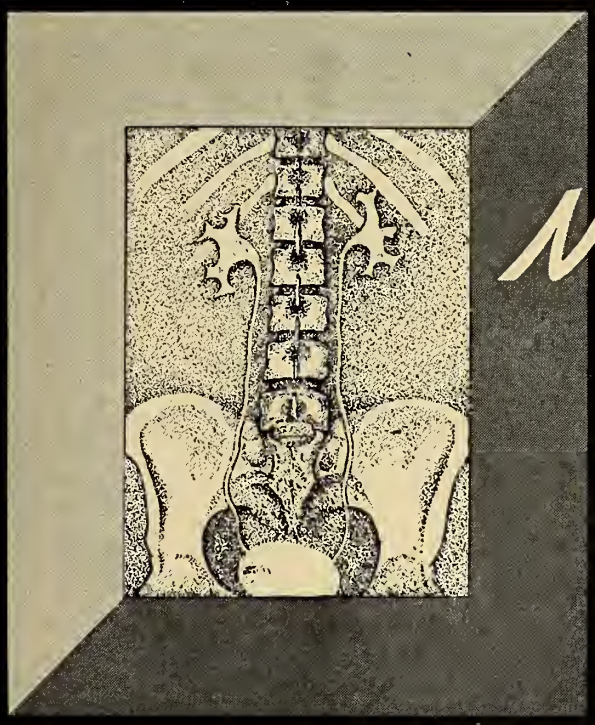
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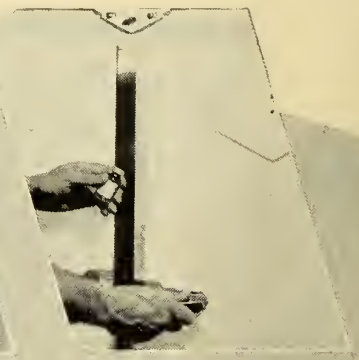




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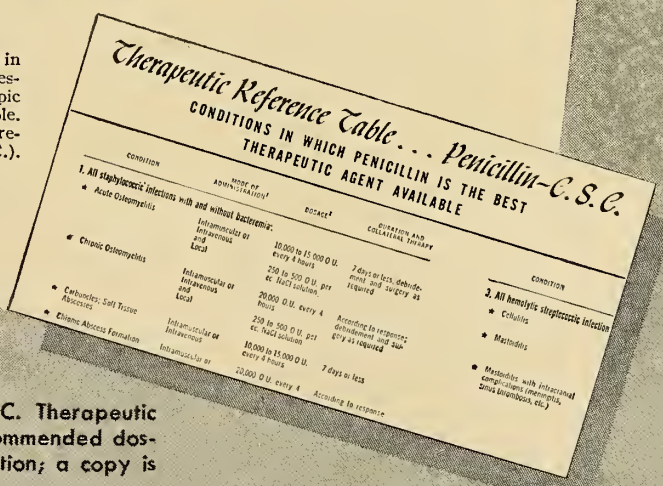
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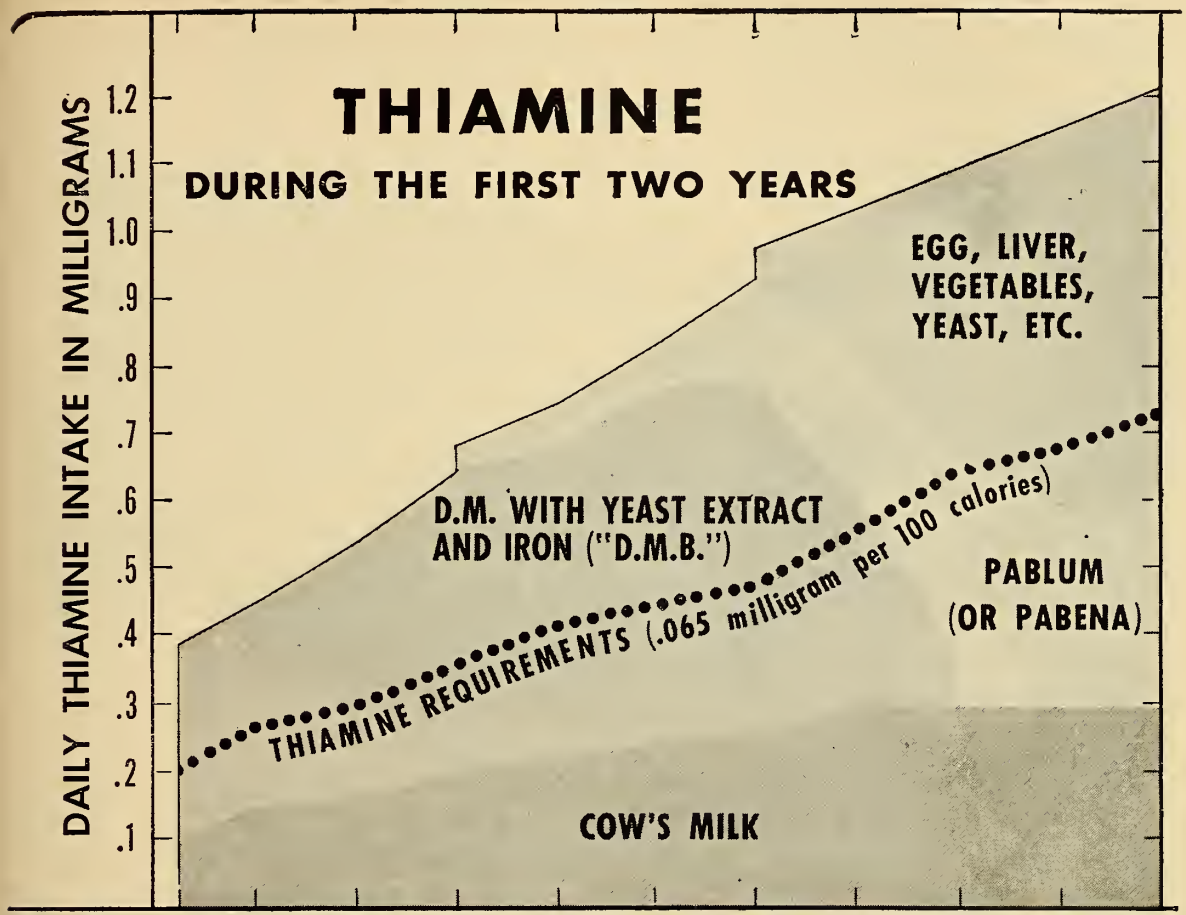
". . . at least from 200 to 300 grams of protein is needed for replacement alone. One must give the patient as much food as he can take . . . give him a good protein, one that contains all of the essential amino acids." (Elman, R.: Physiologic Problems of Burns, J. Missouri M. A. 41:1 [Jan.] 1944.)

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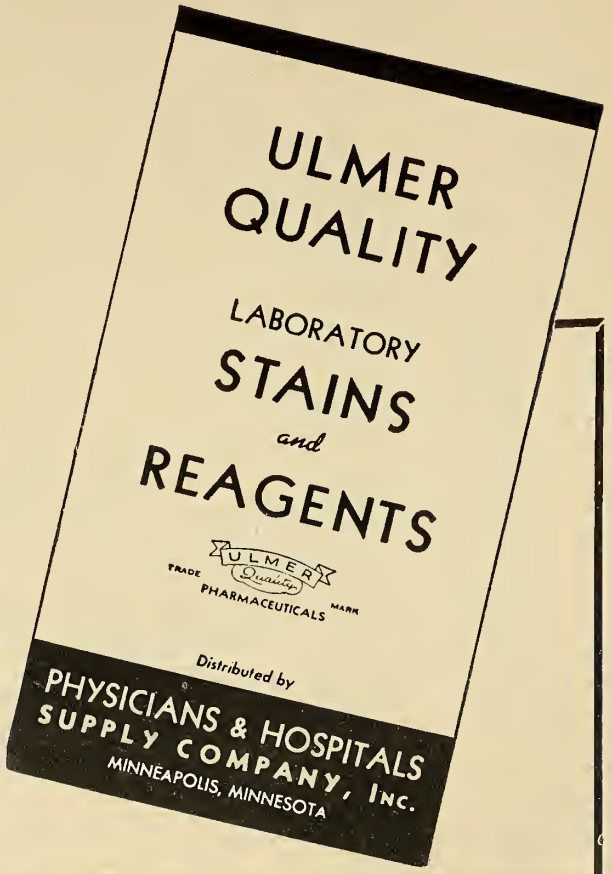
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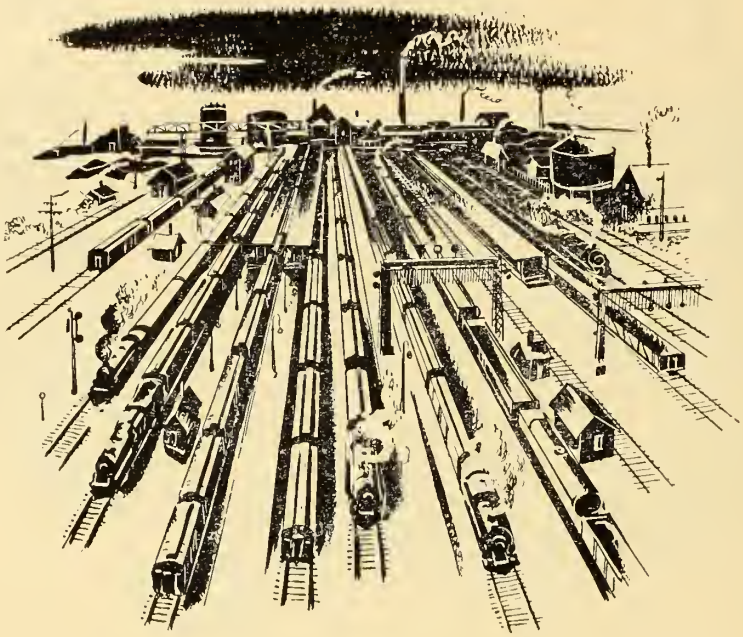
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MEDICAL INDICATIONS FOR SPLENECTOMY

GURTH CARPENTER, M. D.
Associate Professor of Medicine, University of Southern California School of Medicine

THE operation of splenectomy is said to enjoy considerable antiquity. The operation of unilateral mastectomy to free the sweep of the bow string we dismiss with the Amazon as belonging strictly to mythology. It would seem to have been rather a steep price to pay for equality of the sexes in the days of non-anaesthetic surgery. It is with a different ear that we listen to the words of the younger Pliny (23-79), a naturalist whose words were apt to contain the germ of truth. Of the spleen he remarked: "Sometimes it is a peculiar hindrance to runners, so that they burn it away from these runners that are incommoded by it." We may here add the observation that afer all these years very little is known concerning the pathalogical physiology of runner's stitch, but modern belief would plead the spleen is not guilty.

In the sporadic literature of the post-renaissance there are scattered reports of splenectoomy, principally by military surgeons who found the abdominal cavity laid open for them by the exigencies of war. However, led by Dionis, quite a school of electric splenectomists grew up aronnd Padua in the early 1700's. They were probably operating, for the most part, on chronic malarial spleens and it is even possible that some of their relatively few survivals did indeed experience some benefits from the operation. However, it was not till the days of aseptic surgery that the operation of splenectomy became safe enough to enter the stage of empirical experiment. Between eighteen ninety and nineteen ten, hundreds of irrational splenectomies must have been performed in an experimental frame of mind. It is safe to say that during this period the indications for operation were the combination of a serious illness, considerable splenomegaly, and a surgeon willing to undertake the risk. For instance, the late Sir Berkeley Moynihan, for many years the ebullient doyen of British surgery, writing in the early nineteen twenties, had no difficulty in quoting 20 cases of chronic myelogenous leukemia personally splenectomized by himself. Rational splenectomy, apart from that predicated by acute surgical conditions, was not established by empirical experiment until the second decade of the twentieth century.

Part of the difficulties which have faced investigating physiologists and surgeons in their rationalisation of the surgical approach to the spleen is contained by the fact that in the higher orders, man included, there is no function of the spleen which cannot be performed adequately for the maintenance of normal life by other systems of the body. Splenectomy in the normal is followed by few measurable changes. Having no demonstrably essential function, the study of disordered function has been difficult, and there is no disease in which splenectomy is effective in which the pathalogical physiology is fully understood.

I intend to leave the discussion of the acute surgical spleen strictly to my surgical confrere in this presentation. However, he will not mind if I remark that the common background for rupture of the splee nis pre-existent disease of the organ. Large soft spleens, such as those of typhoid fever, may tear easily. In grossly enlarged spleens infarction is very common, and infarrcted surfaces rupture easily, as in endocarditis, or chronic myelogenous leukemia, or sickle cell anemia in the earlier stages. The malarial spleen is notable in the ease with which it is ruptured by quite petty vionence. Any medical officer who has worked among native communities has investigated numerous cases where rupture has been followed by long delayed hemoperitoneum and consequent charges of witchcraft.

Splenectomy in the Anemias

a. Congenital hemolytic anemia.

The only absolute indication for elective splenectomy is the syndrome of congenital hemolytic anemia, or the congenital familial acholuric jaundice of Minkowski-Chauffard. The disease is characterised by its familial nature, though sporadic cases are seen. Constantly

(Read before Annual Meeting, Arizona State Medical Association, April 16, 1944.)

present are small, spheroidal red cells called microspherotcytes.

(A) The severity of the hemolysis, with the jaundice and the anemia, varies greatly within one generation of an affected family. This brings us to the interesting observation that the grade and severiy of hemolysis is not dependent on the degree of microspherocytosis, nor upon the fragility of the red cells in hypotonic saline. It is not improbable that the key factor is resident in the spleen. Such mild cases escape the need for splenectomy. The more severe cases have characteristic phases of hemolysis with episodes of jaundice and anemia, and these episodes are attended by epigastric pain closely simulating biliary colic. Later, pigment stones accumulate, and there may be genuine biliary colic, and the spleneetomising surgeon must weigh the necessity for cleaning out the stones.

Recognition of the typical pasty faced, poorly developed juvenile, or young adult, with his jaundiced episodes and family history is not difficult. The finding of microspherocytosis and of increased fragliity clinch the diagnosis. It should be emphasized that chronic low grade icterus in the absence of mierospherocytes means that the jaundice is not due to familial hemolytic anemia. I have seen one ease of familial hyperbilirubinemia, and one case of juvenile hepatitis splecentomised under the mistaken impression that they were hemolytic icterns. Reticulocytes, which are evidenee of the bone marrow's response to hemolysis, are present particularly after hemolytic episodes. Commonly they are between ten and thirty per cent. Here again we find a matter for our enriosity. If by hemolysis we lower the blood of a normal healthy person acutely to the neighborhood of 2½ millions, his bone marrow response is vigorons and apt to lead to retieulocyte responses of seventy or eighty per cent. In congenital hemolytic anemia it is common to find blood counts of the same order, but with the reticulocyte levels of five or ten per cent. Just as soon as the spleen be removed, however, there is vigorous reticuloeytosis and the count return to five millions. The implication is that the disordered spleen is competent to depress the production of reticulocytes from the bone marrow deposits. This organ, when removed, usually proves to weigh less than one kilogram, and is distinguished by great congestion of the pulp spaese with blood. Apart from the content of hemosiderin in pulp eells, whieh will give a vigorous Prussian Blue reaction, there is remarkably little to distinguish the pathology of these spleens. In particular, there is not much evidence of phagocytosis of red cells. It is to be noted that the spleen may not be palpable clinically in well established cases.

Spencer Wells seems to have removed the first known spleen in this disease. However, he was operating under the Cartre Blanche of the surgeon of 1887, and did not know with what he was dealing, and Dawson recovered his case in 1932. Minkowski and Chauffard popularized the description of this disease about 1900, and the first recorded splenectomy in 1912. The results in young adults appear to be remarkably uniform and suecessful. However, it is generally thought unwise to splenectomise in the acute hemolytic crises, though Dameshek vigorously contests this attitude as unsonnd, strongly advocating emergeney operation. Infant and chlidhood eases are apt to be more severe, and the operative mortality higher. A few cases in infant which bear the diagnostic imprints of congenital familial hemolytic anemia will apparently not benefit from splenectomy, which leads one to wonder if in them the abnormal retieulo-endothelial function is diffnsed over other organs than the spleen. However, onr knowledge of the neonatal hemolytie anemias is very incomplete, and ultimately a different diagnostic braeket may be found for these cases.

b. Aeqnired hemolytie anemia.

Our attitude toward splenectomy in aeqnired hemolytic anemia is currently in a state of flux. It has generally been held that in all forms of the syndrome splenectomy is not helpful. However, strong pleas for splenectomy in both aente and chronic types have recently been entered by Dameshek and his eo-workers. The situation certainly calls for future evalnation.

It is probably fair to state that splenectomy should not be considered in the hemolytie anemias of chemical origin, those due to red eell infestation by protozo aor bacteria, and those associated with myelophthisis, or ehirrosis he-

paticae. It is dubious that acute hemolytic anemia should be operaed on. Many are self limited if given transfusions. Acquired hemolytic anemia (with or without demonstrable hemolysis) of unknown origin may be experimentally splenectomised. There is no point in Marcia-Fava syndrome, nor from Paroxysmal removiug the spleen from instances of the Hemoglobinuricas.

c. Primary splenic neutropenia.

In 1938 Doan and Wiseman announced a syndrome which had not been hitherto described. Their patients had large spleens, and recurrent febrile episodes, with remarkable tendency to surface infections. There was marked granulopenia, together with an anemia of hemolyticc characteristics, and often thrembopenia. Splenectomy was immediately and completely curative, and none of their patients relapsed. In the spleen abnormal sequestration and phogocytosis of granulocytes could be demonstrated. These cases are rare, and diagnosis would appear to carry th eimplircation of an absolute indication for splenectomy.

d. Refractory anemia of unknown etiology.

Recently L. E. H. Whitby and J. C. Britton, authors of the text "Disorders of the Blood", have raised the question of splenectomy in so-called "aplastic" anemia. Anemias of unknown origin, not demonstrably due to toxic or deficiency disease, are heeped under the generic name of aplastic or refractory anemia. These authors are hematologists of distinction whose opinion must be respected. Whitby has records of five such patients out of eight in which he is satisfied htat the result justified the means. All were "well diagnosed cases" (personal communication), and five have been able to quit the transfusion life, which is adequate measure of success in this disease. I have had one such case splenectomized, and the need for transfusions has been lowered from every six weeks to three times in the last year.

e. Sickle cell anemia.

Splenectomy may be considered in the early cases with gigantic splenomegaly. It is claimed that the subsequent anemia and frequencey of painful episodes is reduced. Late sicklemia splenectomizes itself by infacrtion.

Splenectomy in Purpura

(a). Thrombocylopenic purpura.

It has been known since the days of Denys and of Hayem in the Paris school that some cases of abnormal hemorrhage are accompanied by reduction in the platelet count. The writings of Duke, Homer, Wright, Minot, and others popularized the idea that the absence of platelets was, per se, the cause of abnormal hemorrhage. Hence the division of thrombocytopenic and non-thrombocytopenic purpura came to be widely accepted. Since we see many symptomatic thrombopenias which are not accompanied by hemorrhage we now know that some additional factor than mere low platelets must be present to cause bleeding. In 1917 Kaznelson of Vienna was responsible for the first successful splenectomy in this disease, and he was naturally sponsor of the belief that the spleen destroyed platelets. A variant view based on early bone marrow studies was that of Frank, who thought that the spleen might inhibit the production of platelets in the bone marrow. It is true that occasionally megakaryocytes may be absent from the marrow, but the researches of various workers, notably Limarzi of Chicago, have shown that usually there are more active megakaryocytes present than normal. After splenectomy, the bleeding time is shortened, and the capillary fragility improved long before there is an effective rise in the platele tcount. And the interpretation most satisfactorily explaining this fact is that of Klima of Vienna, who held that platelets are reduced solely because they are being utilized to excess. This theoryr is most consistent with the beautiful observations of Macfarlane in London, who demonstrated the essential role of capillary contraction in controlling hemorrhage, and its relative paucity in both thrombocytopenic and non-thrombocytopenic purpora.

Thrombocytopenia with purpura, together with prolongation of the bleeding time and abnormal capillary fragility is a symptom complex that may be either symptomatic or idiopathic.

In the past, operation has suffered from considerable post-operative mortality (20% in Wintrobe's edited figures), and a high inccidence of relapses. This is because splenectomy persists in acute cases, in most of which the platelet reduction is secondary and not benefitted by such interferences. In many chronic cases the platelet reduction is secondary to such dis-

eases as lupus erythematous, or chirrosis hepatica, or cryptic leukemia, or drug idiosyncrasy, and splenectomy will not be of benefit. When diagnosis has been correctly made, the chances that splenectomy will produce permanent benefit to an individual patient are about 70%.

The points that should dwell in the surgeon's mind, then, are as follows:

1. Splenectomy is not the treatment for acut ethrombocytopenic purpura. It is merely an additional hazard to the patient.

2. Thrombocytopenic purpura with fever, or with history of exposure to drugs, or thrombocytopenia with anemia beyond that which is reasonably accounted for by bleeding ,or T. P. with gigantic splenomegaly, are almost certainly symptomatic and must not be expected to be benefitted by the operation.

3. It is dubious that it is fitting to splenectomise instances of T. P. in which adequate megakaryocytes cannot be demonstrated in the sternal punctate, which should be done in all contemplated cases.

4. Splenectomy is not the cure-all for T. P. About 25% may be expected to relapse.

Splenectomy in other hemorrhagic syndromes that T. P. is in a very weak position, and cannot be advocated. Nevertheless, one may occasionally meet with a case of purpura with prolonged bleeding time, excessive capillary fragility, but normal platelet count (the so-called idiopathic, agnogenic, non-thrombocytopenic purpura) which will benefit. However, the majority of cases do not benefit, and there is now no apparent way in which they can be distinguished.

Splenectomy in Other Diseases

No other disease can be said to offer more than a very weak indication for splenectomy. The problem of splenectomy in the Banti syndrome, originally advocated by Banti himself, in the belief that the spleen was the primary seat of the disease, is no longer performed for that reason. It is generally believed that this organ is more or less an innocent bystander, involved for no fault of its own. In any of the considerable series in which the pressures in the splenicc vein were studied by Ronsselot and his workers the pressures were considerably elevated. Yet it is generally conceded that the spleen shows more fibrous change than is accounted for purely by portal hypertension. The given excuse for splenectomy today is that it offers a chance to cut down the circulation through the short gastric veins and to ligate dilated esophageal veins. However, Rousselot's own figures in this respecct show that those cases which bled before operation are likely to be those which bleed after the operatioi. It is probably to be conceded that post-operatively there is a chance that the anemia and the leukopenia are improved. There is no evidence that the course of the chirrosis is influenced. Speaking on the basis of two, only, cases of the Banti syndrome seen after splenectomy, it seems probable that these patients bled particularly when the prothrombin time falls.

Finally one must remark that experimental splenectomies continues to be performed on the basis of not unreasonable hope. One may instance Coburn's removal of the spleen from nine rheumatic children, in the hope that with the reduced anti-streptolysin titer there would be reduced rheumatic change, removal of the spleen in Marcia Fava syndrome, removal of the spleen in resistant malaria, and in Wassermann fixed syphilis. And in this experimental frame of mind, spleens continue to be removed where they had perhaps better be left for the patient's well-being. Spleens should certainly not be removed from the Cooley syndrame, from chronic non-leukemic myelosis in which it is a source of blood, nor in polycythemia rubra vera where it performs valuable reservoir functions, and possibly contributes to the reduction of the blood count.

The indications for splenectomy, other than surgical, then, may be summarized as follows:

1.	Absolute:	Severe congenital hemolytic anemia. Primary splenic neutropenia.
2.	Probable:	Idiopathic, chronic T. P. Certain early cases of hemolytic anemia. Acquired. Especially acute cases not responding to therappy by transfusion.
3.	Possible:	The Banti Syndrome. Early siekle cell disease with marked splenomegaly. Acquired non-T. P.

Absolute contraindications: Cooley's dis.; non-leukemic myelosis;
Polycythemia rubra vera.

TUMORS OF THE NASOPHARYNX

FLORENCE B. YOUNT, M. D.
Prescott, Arizona

(Report of a Case of Anglo-Endothelioma in a Four Year Old Child.)

TUMORS of the nasopharynx are so rare, especially in children, that an interesting case in our midst forms the basis for this report.

Case: J. S., age 4, developed a "cold in the head" about the middle of May. There was very little fever, no remarkable symptoms except a failure to recover as time went by. By May 28 the child was very choked up, was having noisy and difficult breathing, his speech was thick and deglutition difficult. He was brought to the office. On physical examination there was no fever, no cervical adenitis, there was purulent discharge from the nose. Respirations were entirely oral, and there was enough obstruction to cause suprasternal retractions. Upon looking at the throat, there was a large, red swollen area above and around the right tonsil. It seemed higher than the usual peritonsillar abscess, but nevertheless looked exactly like one. The area felt firm, and an attempt was made to open it. No drainage followed, except that the pressure made caused considerable pus to come from the nose. He was given large doses of sulfamerazine. On subsequent days five more attempts were made by three of us (Drs. Yount and Swetnam and I) to establish drainage. Each time pressure was made in the throat, pus would come freely from the nose, but that was all. On June 8, the child was having increasingly more dyspnea and was showing exhaustion from lack of sleep, and he was hospitalized. His blood count: Red blood cells 4,400,000, WBC 12,200 with a normal differential. Hbg. 79%. Culture of the nasal pus showed a mixture with micrococcus catarrhalis predominating. Penicillin was started, and the child received altogether, 400,000 units. For two days he seemed less toxic and less dyspneic, but finally began vomiting and losing ground, and having periods of severe dyspnea, especialon his face and by June 13, would choke up ly at night. He could only sleep lying forward every time he thoroughly relaxed in his sleep.

At 2 a. m. on June 14 he was in very bad condition, Dr. Swetnam was called in consultation, and after a conference with the family it was decided to try to open the deeper layers of the throat, regardless of the risk of hemorrhage. This was done, but only solid tissue was encountered throughout. Bleeding was minimal. Pus came from the nose, just as it had on previous similar occasions. Our conclusions were that the mass must be a tumor. Later that day the boy was sent to Dr. W. W. Watkins in Phoenix for biopsy and x-ray treatment.

Reports from Phoenix were that the boy put in another bad night in the hospital there. Dr. Cruthirds removed some of the small pulpy masses from the adenoid region (Dr. Swetnam had noted their presence earlier) and upon examination by Dr. Rosenthal the tumor was classified as an angio-endothelioma. The boy was then given seven deep x-ray treatments and allowed to come home.

In the middle of July, I saw him again. He had gained five pounds, and was so hungry he was eating five meals every day. He was able to breathe without difficulty and could sleep lying on his back. The throat looked very nearly normal, with only a slight fullness remaining on the right side.

All of us who examined and treated this child felt he was an unusually nice little fellow, showing thhe maximum of patience and fortitude. All proceedures had been carried out without any anesthetic whatsoever, and each time he cooperated to his best ability. Consequently we all were interested in trying to find out what his chances for recovery might be.

In searching the literature, I found this lesion to be so rare it is hard to find statistices on which to base a prognosis. Classification of tumors of this area seems to be in a highly confused state, with many names given to the same or similar types. All pathologists agree they are malignant—and many clinicians observe the fatal course of the disease, but the multiplicity of names leaves much to be desired toward a clear understanding.

This paper was given at a Staff Meeting, Prescott Community Hospital, September 14, 1944.

In 1941, Dr. Arthur Stout reported in Laryngoscope that in reviewing 70,000 patients in the Bordeaux Otorhinolaryngology Clinic only 32 tumors of the naso pharynx were found. Ninety-five per cent were found in males. In another survey of 752 malignant tumors of the nose, throat and larynx, 47 were found in the naso pharynx. However, when all tumors of the area are considered, malignancy runs high. In New York Presbyterian Hospital in a series of 82 cases of tumors and cysts of the nasopharynx, 72% were malignant. There it was also observed that malignancy was especially high among the Chinese.

A true endothelioma is neither a carcinoma nor a sarcoma, and must arise from endothelial cells of the peritoneum, pleura, dura, lining of blood vessels or lymph channels. Ewing demands the presence of flat or cylindroid endothelial cells, which may be present only in small areas of the total tumor, the bulk of which may be made up of large numbers of spindle-shaped fibrous looking cells. There are usually numerous small blood vessels. Consequently one wonders if "lympho-fibroma", "lympho-epithelioma", "reticulum cell sarcoma" and many more such terms are not all some type of endotheliomata.

Endotheliomata grow rapidly, and may bleed easily. Ulceration and secondary infection by Vincent's organism or the diphtheria bacillus are not rare—especially when they occur in the nasopharynx. There the usual symptoms are (1) obstructed nasal breathing, (2) obstruction of Eustachian tube with tinnitus, impaired hearing and even mastoiditis, (3) mild epistaxis. The cells of the tumor grow more rapidly in the presence of infection and irritation and go back to their embryological property of being phagocytic. The tumor does not often metastasize, but uses the policy followed so effectively in the current war of "divide and conquer" as it invades all surrounding tissue. It causes early bone necrosis, and in the skull soon leads to involvement of the V and VI and also the II, III, and IVth cranial nerves.

Another characteristic of endotheliomata is their marked sensitivity to radium and x-ray. In spite of the fact that the naso-pharynx is an exremely difficult spot to reach, x-ray offers the best treatment, as surgery or cautery are both unsatisfactory. Rieva Rosh of Bellvue Hospital, writing in the August, 1944 Medical Woman's Journal, points out that the first and heavy treatments should be given in the first 30 days, and if the tumor has not been reduced 50% by the 22nd day, it cannot be destroyed by external radiation alone. In the Bellvue series, tumors of the hypopharynx have a 10 to 12% survival rate after five years. If the cervical lymph nodes are involved, the results are most discouraging.

A study was made at the Mayo Clinic reviewing all cases of malignant tumors of the lip, mouth, palate and pharynx in individuals under 30 years of age, and reported in the Proceedings of March, 1940. It was found that those of the mouth corrresponded closely with any age group—the type of malignancy being the chief factor of survival. Tumors of the nasopharynx in the younger age group were more malignant than when occuring in older individuals. There it was found that 29.3% had a five year survival rate, and 18.2% lived 10 years.

Som and Neffson, in Annals of Otology, Rhinology and Larnology of March, 1940 describe cases somewhat similar to ours, but call the tumor juvenile angiofibroma—at the same time mentioning the amount of endothelial and mesenchimal tissue found on histological study. Their two cases were in boys 17 years of age, and were more gradual in onset and responded to radium. They comment on the fact that the occurrence is predominately in males, and the fact that they often undergo spontaneous regression when the 20th year is reached.

Seal and Ide, writing in the Laryngoscope of February, 1942 describes a case of angioendothelioma of the mastoid. This child developed a facial palsy at four months, but was not ill until nine months old, when there was fever, bloody discharge from the right ear and edema over the mastoid. X-rays were negative, but the area was opened anyway and pus was drained. Two weeks, later the mastoid was opened and granulations and necrotic cells cleaned out. The lesion healed without any trouble. Five months later—the child was now 21 months old—there was "something sticking out of the ear." A large and small polyp were removed and a large perforation in the canal found and a probe passed into the mastoid process. Laboratory examination of the polyps re-

vealed this to be a malignant tumor—each pathologist seeing the slides gave it a new name: "angioepithelioma", "anaplastic malignant tumor", "Ewing's sarcoma", "nevo-carcinoma", etc. This child was given large doses of x-ray and the pathology, except for the perforation, was much improved six months later. Seal and Ide were pessimistic about the outcome, however.

I am grateful to the Doctors Yount, Swetnam, Watkins, Phillips, Cruthirds, Rosenthal and all who helped with this case, and to the Grunow Memorial Library for their assistance in surveying the literature. From this study one can draw some conclusions: (1) tumors of the nasopharynx are rare, but when they do occur, two out of three are likely to be malignant, (2) most endotheliomata do not metastasize but do their damage by direct invasion of surrounding tissues, (3) accurate diagnosis may be obscured by obtaining positive smears for Vincent's organism or diphtheria bacillus, and (4) the best treatment is early and adequate x-ray or radium treatment.

RABIES

H. L. MARTIN, M. D.
Phoenix, Arizona

RABIES in animal and man is not a new problem. Decades ago, inhabitants would flee from their cities when rabies was known to be present among the dogs in their midst. Eventually the method of transmission from animal to animal and from animal to man was discovered with resultant reduction in cases among human beings by a more or less effective program of pet control.

Late in the nineteenth century Pasteur discovered a means of preventing the occurrence of the disease in man by the use of attenuated organisms obtained from the dessicated cord of an animal which had had the disease. This method of treatment, with considerable refinement in the production and the standardization of the vaccine, is still used for prevention of rabies in those which have had definite contact with a rabid animal. With the refinement of the vaccine, it stands to reason, there was an expected drop in the incidence of severe reactions to the use of the vaccine, such as encephalitis, paralysis, transient and permanent an an occasional case of rabies due to improperly attenuated vaccine.

The disease itself is caused by a virus, transmitted from an infectious animal to a susceptible animal or man, usually by means of a bite in which there is a break in the skin sufficiently deep to permit the innoculation of the virus present in the saliva or around the teeth to be implanted into the tissue. It is generally believed by most authorities that the virus must be innoculated into the skin in a fresh wound, and that the mere presence of the infecting organism on the surface of the unbroken skin is not considered sufficient for infection.

From the point of innoculation, the virus reaches the central nervous system by traveling up the course of nerves, eventually reaching the brain. The interval of time between the innoculation and its arrival in the central nervous system depends on the site of the injury, with the result that our method of treatment must depend on variable factors which cannot be arbitrary under all circumstances.

Since this case is to be discussed from the clinical aspect by another person, I will refrain from going into clinical aspects of the disease, but rather limit my remaining remarks to the program of preventing the spread of rabies.

Naturally, the simplest and the most effective means of preventing rabies in man is to control it in animals, particularly dogs and other pets which are closely associated to family groups. This calls for concerted action on the part of the enforcement agencies and others who are responsible for the elimination of the stray or the vagrant dog or cat, and for the whole-hearted cooperation of those who own pets to keep their dogs and cats under control.

The efficiency of anti-rabies vaccine for dogs is debatable, but from the literature at hand, it appears that most authorities agree that from 65 to 80% of dogs will be protected by its use. That being the case, wide-spread use of vaccine would aid very appreciably in the control of rabies in animals. However, whatever method is used or what combination of methods are used, the fact remains that the most effective

single program is to control rabies in animals and our problem of human rabies is nil.

Since such a condition does not exist in this county at present, and since we know that we do have an unusually high incidence of the disease in animals, we are confronted with the problem of deciding if, when and how much Pasteur treatment to give.

We will begin with the realization that any animal in this area might have rabies—since we know it does exist here. Every dog which, for one reason or other, bites any one, should be isolated for a period of not less than 10 to 14 days under observation. If he is still healthy and active at the end of 14 days, it is an accepted fact that the likelihood of that animal having been infectious at the time of attack is very remote. If, however, the dog dies within that time, the *head* of the animal should be sent to the State laboratory or some competent laboratory *immediately* for the examination of the brain substance to determine whether or not Negri bodies are present in the nerve cells, particularly in Ammons Horn. Every effort should be made to get the animal under isolation—it should not be shot unless it is absolutely impossible to catch it. Above all things, don't shoot it through the head, or otherwise injure the skull.

Insofar as the treatment of the child or adult is concerned, the administration of the antirabies vaccine is not without some rather severe complications. Statistics of large numbers of cases would indicate that fatal complications to the use of vaccine vary from 1 in 3500 to 1 in 8000. But, there are other rather disconcerting problems of localized pain and tenderness at site of innoculation, fever and malaise, encephalitis and paralysis in varying degrees which are found more frequently. Refinement of the vaccine each year eliminates many of these situations.

Some of the factors in the treatment of persons who are contacts of a possible case of rabies as follows:

1. All wounds caused by the animal should be thoroughly cleansed with soap and water and then treated with cauterization agent such as fuming nitric acid or by a mercurial tincture. Certain authorities feel that it is unnecessary to use drastic caustics—particularly on the face where scars are unwanted.

2. If the wound is in the shoulder, neck, or forearm, treatment should be started at once, and discontinued after 14 days, provided the dog proves to be healthy.

3. If the area of injury is on the extremities or elsewhere, it is considered safe to wait until the dog has been observed, and begin treatment if the dog is later proven to be rabid.

4. If the animal cannot be found, and a definite break in the skin has been made, treatment is advisable.

5. If the individual has had only a casual contact with the dog, which later proves to be rabid, but with no direct injury, it is advisable to give treatment to the contacts if less than 12 years of age, and not if they are older than that.

6. Undoubtedly there will be cases come to the attention of the physician of the child who may have come in contact with a known rabid dog, but where no history of direct injury is elicited. Good judgment in such a condition may be impossible because of lack of necessary information, so treat as in casual contact. (5)

It is obvious that this discussion does not cover each identical situation which will arise, but with a bit of good judgment and proper handling of the patient and parent, a conclusion can be arrived at which will be satisfactory. No arbitrary rules can be stated to cover all the situation, so intelligence and tact must be used unsparingly.

REPORT OF TWO CASES OF HUMAN RABIES

Case No. 1

From the proceedings of St. Monica's Hospital Staff, Sept. 18, 1944.

DR. MATTHEW COHEN, Phoenix: A ten year old Mexican boy was admitted to this hospital on June 4, 1944, complaining of severe headache and inability to swallow very well. He was taken sick about one day prior to admission with high fever, restlessness, and difficulty in breathing and swallowing.

Twenty-one days prior to admission he was bitten on the left cheek by a dog. This dog died within a day and was examined for rabies. Negri bodies were found in his brain.

Pasteur treatment was started on May 16th, 2 days after the patient was bitten. He received

2 injections daily for 4 days and then 1 injection a day until a total of 18 vials of vaccine were administered.

Physical examination on admission revealed a very restless and apprehensive, young boy, constantly changing position in bed. Temperature was 104°. Pulse 128. Respirations 30. He was well nourished. His pupils were dilated but reacted well to light. Ears, nose and throat were essentially negative. There was no nystagmus or ptosis of lids. His eyes followed the examining finger both vertically and horizontally. There was no loss of coordination of eye muscles. Neck: no lymphadenopathy. There was slight rigidity of neck and upper spine. Chest: Lungs were clear to percussion and auscultation. No rales were heard. Heart: rate and rhythm regular. No murmurs were heard. Abdomen: no tension, tenderness or tumors. Extremities: Hyperactive, but equal knee jerks. Koernigs were negative.

Urinalysis: specific gravity 1.024; albumin 2; sugar and acetone negative. There was an occasional white blood cell and 6 to 10 red blood cells per high power field.

Spinal puncture was done several hours after admission and revealed the following: there was slight increase in pressure. Cell count was 702 with lymphocytes predominating. Pandy's test was negative. Smear was negative and culture showed no growth.

I visited the boy three or four times on the day of admission and on the following day. I was impressed by the extreme restlessness, excitability and apprehension shown by the patient. On two or three occasions, I saw saliva running out of his mouth. Rather than swallow this saliva, he would constantly wipe it off with the sleeve of his hospital gown.

He was perfectly conscious of what was going on about him. He answered questions although it was difficult for him to talk. His voice would change pitch and very often end up in a whisper.

When offered water he would immediately start coughing. Usually he would refuse it, but on occasion tried unsuccessfully to drink some. He would take a sip of the fluid, throw his head back and bolt it down his throat. Once in a while some of it would run into his larynx and he would start coughing violently.

He became more and more restless and excited. On one occasion he climber over the side of his crib and fell to the floor. About two to three hours before he expired, he became very quiet and listless. His last recorded temperature was 106⁴ degrees. He lived about 30 hours after his admission to the hospital. His pulse varied between 128 to 132. Respirations 28 and 32.

Treatment consisted of parenteral fluids, phenacetin and morphine for restlessness, and 100,000 units of penicilli nintraspinally.

Pima County Health Department, Tucson
Case No. 2

DR. LEWIS H. HOWARD, DR. C. R. KROEGER: A twelve year old Mexican boy was bitten on the right index finger by a dog which was already in the pound wagon. In less than 30 minutes following the bite, the finger was cleansed of blood and canterized with fuming nitric acid.

The Wound: A ragged incision which started at the junction of the middle and distal phalanges of the right index finger and continued to the end of the distal phalanx lifting the outer side of the nail in its course. The cauterization of this wound was made by dropping fuming nitric acid into the wound instead of swabbing in the usual manner.

The child was bitten on August 15, 1943, immediatetly treated as to the wound; the dog was sent to the city pound for observation, where he dog died on August 19, 1943. The head was sent to the laboratory and reported positive within 96 hours of the actual time of biting. The Semple method of 14 injections was instituted immediately; the child missed two daily treatments but did receive the 14th and final injection on September 3, 1943, a period of 16 days and a complete treatment within 20 days of the bite. Following this last injeetion the child stated that he had a basal headache which became progressively worse and when seen that same night by a private physician the child had a mild rigity of the neck. This condition progressed from Friday through Sunday, at which time the child began to show symptoms of a seriously disturbed central nervous system. These symptoms were extremely restlessness, thrashing, staring without purposes, spasmatic motions, lack of muscular coordination, dysphagia to the point where the child violently slapped away the water container. The child remained fairly conscious although semi-stuporous; his thoughts and erratic conversation were all on the religious side. Morphine sulphate ½ grain was given once and it had no effect. During the investigation following this child's death, it was discovered that this child had been playing with this same dog one week previously to the time that the dog bit the child. The dog began to aet queer and its owner locked him in a small shed from which the neighborhood children released the dog to play with him. The dog ran at large for three days and we handled five laboratory proven cases of dog rabies in the neighborhood from this one animal.

In a review of the facts presented by this child's death, we are of the opinion that the child had been innoculated with rabies as long as one week previously to the bite of August 15, 1943, so that the child had actually become ill with rabies during the 14th injection treatment. A copy of the post-mortum findings is enclosed.

MEDICO-LEGAL AUTOPSY

On order of the coroner, Judge C. W. Gardner, an autopsy was performed at the Tucson Mortuary by Dr. H. S. Faris on September 7, 1943 at 11:00 A. M., in the presence of Dr. J. M. Rogers.

GROSS ANATOMY

The embalmed body was that of a fairly well developed Mexican male approximately 10 years of age. The pupils are regular and normal. There was no evidence of bruises or external violence. The body was opened by a Y incision.

CHEST: There was no fluid in the pleural cavity.

Lungs: The lungs were free in the pleural cavity, and on section neither lung showed any significant changes.

Heart: The heart was normal in size. The valve leaflets were all normal.

ABDOMEN: There was no fluid in the peritoneal cavity.

Stomach and Intestines: No gross pathology.

Liver: The liver was normal in size and shape. The surfaces were smooth. The cut surface is normal in appearance.

Gallbladder: The gallbladder is filled with bile and contains no stones.

Spleen, Pancreas and Adrenals: Normal in size and appearance.

Kidneys: Normal in size and contour. The capsules strip easily, leaving a smooth surface. The cut surfaces were normal.

Bladder: Normal.

HEAD: The scalp was opened by the usual incision and the skull cap removed. There was definite injection of the vessels of the dura and an injection of the fine cerberal vessels. The appearance of the injection indicated irritation of the brain and meninges. The brain was removed and on section no gross pathology observed. The sections were taken for microscopic examination.

MICROSCOPIC EXAMINATION

Sections of the brain tissue stained by selective methods show inclusion bodies in a few of the cells. These are typical negri bodies.

DIAGNOSIS

Rabies.

HERVEY S. FARIS, M. D.

THE ARIZONA OCCUPATIONAL DISEASE DISABILITY LAW

By RAY GILBERT, *Chairman*
The Industrial Commission of Arizona

DURING the past decade several attempts were made by interested parties to extend the provisions of the Workmen's Compensation Law of the State of Arizona to provide compensation for occupational diseases. A recommendation was made by our present Governor to the Legislature that a law be passed providing occupational disability benefits to workmen in the State of Arizona; a bill was introduced in the Legislature, was passed by that body, signed by the Governor and became a law known as the Arizona Occupational Disease Disability Law. The Supreme Court held this law to be constitutional and effective as of March 6, 1943.

Prior to the passage of this law, the Arizona State Medical Association, being advised of the contribution made in the field of industrial medicine and surgery by the medical associations of the United States, appointed a committee and requested the employers of the State of Arizona, the State Federaion of Labor (A. F. of L.), and the Congress of Industrial Organizations (C. I. O.), to likewise appoint committees to confer with it and attempt to work out a measure which could be recommended to the legislature for approval.

Representatives of the large mines in the state, of the Arizona Small Mine Operators Association and of other industries appointed a committee; the State Federation of Labor and the Congress of Industrial Organizations appointed a committee, and these several groups conferred over a period of some three months. They had the services of the attorneys for The Industrial Commission of Arizona on certain of the administrative phases of the law, and of the attorneys for several employing interests; with the result that a bill was prepared for submission to the Legislature with a joint recommendation from each of the groups that it do pass.

The bill as submitted by the groups was

passed by the Legislature and approved by the Governor, with the exception that the agricultural industry was wholly excluded from its provisions.

The amendment striking agricultural laborers from the Act was unfortunate in that it is recognized upon the statement of no less a conservative authority than Mr. James A. Emery —who has been general counsel of the National Association of Manufacturers for a quarter of a century—that from studies made by committees of that association, "there are more occcupational fatalities and injuries in farm work than in any other industry."

The law authorizes the Industrial Commission of Arizona—which Commission enforces the compensation law—to administer the provisions of the Occupational Disease Disability Law.

The state and all of its subdivisions and all private employers—except agricultural—having three or more employees, are required to insure their employees in the state fund, with an authorized private insurance carrier; or qualify as a self-insurer.

The statute lists and defines thirty-five classifications of occupational diseases. It includes all diseases which were known to result from occupations in the State of Arizona. It includes silicosis and asbestosis; disabilities resulting from the many poisons; dermatitis, ulcers or cancer resulting from contacts with poisonous compounds or industrial products; blisters, abrasions, synovitis, tenosynovitis, bursitis, cellulitis, etc., resulting from friction or vibration, which do not come within the general classification of "injuries by accident", as defined in the Workmen's Compensation Law.

Compensation payments under the law begin after the first seven days of disability. In the case of silicosis or asbestosis they are fixed at $800 for total disability or death, at the effective date of the Act, and are increased each calendar month at theb rate of $70 until the aggregate amount of $5,000 is reached. This figure was arrived at in recognition of the accumulated backlog of silicosis disability over the last quarter century.

As applied to other diseases, in the case of total disability an employee receives two-thirds of his average weekly wage, but not less than $8 per week nor more than $25 per week, provided that in no event the total of such payments exceed $5,000.

In addition thereto, provision is made for medical services, hospitalization and medicines not exceeding $500, and burial expenses not exceeding $150.

The Occupational Disease Disability Law, as distinguished from the Workmen's Compensation Law, makes no provision for either medical or disability benefits during partial disability. It provides compensation or medical benefits only during "total disability."

The law provides for the appointment of two separate medical boards or committees. First, The Industrial Commission is required to appoint a board of three licensed physicians, in good professional standing, each of whom shall have at the time of his appointment and immediately prior thereto at least five years of practice in the diagnosis, care and treatment of diseases of the pulmonary tract, along with the interpretation of x-ray films thereof, and provides that the Arizona Medical Association may, at least annually, certify to the Commission the names of all licensed physicians within the state of Arizona having the qualifications specified. If the list is submitted the appointments must be made therefrom.

In conforming to this provision, the Industrial Commission appointed from a list submitted to it by the Association, to constitute the Board on Silicosis and Asbestosis, the following:

Dr. Louis B. Baldwin, Phoenix, Arizona

Dr. C. P. Austin, Morenci, Arizona

Dr. Chas. W. Mills, Tucson, Arizona.

After the filing of a claim for compensation under the Occupational Disease Disability Law for silicosis or asbestosis, the Commission may, and if any medical fact be controverted, shall direct an examination of and report upon the claimant by the committee of expert consultants, or one of them, including such x-ray and other pathological examinations and tests as in their opinion may be necessary for the purpose of determining diagnosis, disablement, casual relation to the employment, and the nature

and type of medical treatment, hospitalization and other care required. In the event the claim is not controverted as to any medical fact the examination and report of one member of the committee shall be deemed the examination and report of the committee. If the claim is controverted as to any medical fact, the report shall be made by the full committee after a physical examination by at least one member of the committee.

With reference to all other disease, the Act provided for the appointment of a second board —with the proviso that this second board was not authorized to pass upon silicosis cases—and The Industrial Commission appointed on this Board the following doctors:

Dr. J. D. Hamer, Phoenix, Arizona

Dr. Louis G. Jekel, Phoenix, Arizona

Dr. Nelson D. Brayton, Miami, Arizona

Dr. T. A. Hartgraves, Phoenix, Arizona

Dr. D. V. Medigovich, Phoenix, Arizona.

The contents of the reports of the medical boards, when placed in the record, constitute prima facie evidence of the facts as to the matter contained in the report. Any interested party, however, may cross-examine the board or any member thereof; or rebut fidings of the board; in which event, it becomes the duty of the Industrial Commission, acting judicially, to determine the issue. The findings and award of the Commission, which must be written when requested by any interested party, if sustained by the evidence are conclusive upon the Supreme Court, which is given the final authority to review awards of the Commission.

The Act provides that all professional fees, medical or legal, are subject to regulation by The Industrial Commission.

The Utah Disability Law was used as the basis upon which to write the Arizona Act. Therefore, the decisions of the Supreme Court of that state construing the meaning of many of the terms used in the Arizona Act will prove helpful as it relates to compensation; and many of the decisions of the Supreme Court of Arizona construing the Workmen's Compensation Law will prove applicable on the administrative features of the Occupational Disease Disability Law.

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Editorials

Public Relations

Much misunderstanding exists between our Public Relations Organizations and the rank-and-file of the profession. This is not due to ignorance on the part of the members of our profession but because they are uninformed. The National Physicians' Committee for the Extension of Medical Service was formally established in 1939. The Council for Medical Service and Public Relations was provided for by the House of Delegates of the A.M.A. in June 1943. The United Health League was organized the early part of this year by members from six western states including Arizona. The functions of such organizations is to inform and educate the public in all matters pertaining to medical care. While it is privately admitted now that the formation of such groups was long over due, nevertheless their programs have been launched and they are at work. Their principle aim can be summed up in one sentence: To save the American Nation from another noble experiment, namely the Socialization of Medicine. The exact method of approach and the right way to combat such a movement has not been determined probably, but these organizations have broken the ice. However, they are traveling on unchartered seas and much is to be learned. The Medical Profession is in politics much to their

own disgust, and not to their own choosing. The next step is to meet the challenge of the politicians. The Profession cannot perform as a lobby. A hundred and fifty thousand physicians with their families would constitute a very small bloc of votes in this Nation. Besides, huge sums of money are necessary to operate lobbies. So we must depend on establishing the proper relations with our national legislators and the education of the public at large. The Council on Medical Service and Public Relations and the United Public Health League have opened their respective offices in Washington, D. C. The National Physicians' Committee, after completing their Public Opinion Poll last year, have set up a program to cost a half million dollars a year, over a period of three years.

The introduction of the Wagner-Murray-Dingell Bill in Congress was the Pearl Harbor for the Medical Profession. It is not only the intention of our leaders in this battle to defeat this Bill, but they must also offer a substitute in its place. This substitute is voluntary, prepaid, non-profit medical service. The hospital part of this program is being well handled by such organizations as the Blue Cross. The Plans for Medical Service are progressing much more slowly. But it is the fervent hope that the educational program being conducted by our Public Relations groups will bring the desired results.

These Public Relations Organizations need our financial assistance. The National Physicians' Committee is entirely dependent on voluntary contributions. This aid will not be forthcoming until everyone understands who these organizations are and what they are doing. For some reason, some very erroneous impressions have been gained by the rank and file, about the aims and purports of the members of these groups. There is no basis for such conclusions. If one looks over the Officers, or Directors, or Board of Trustees of any of these Organizations you will simply see the names of the leading medical men of the Nation. They are the men who are elected as officers of State and National Societies, men who appear regularly on medical programs, and authors of articles in our Medical Journals, men whose names appear as signatures on the diplomas of the various American Boards signifying specialties. They are men who have Private Practices of Medicine at home, the same as all of us, and are primarily interested in saving our Profession from the hands of the politicians at this particular time.

Blue Cross for Arizona

At a meeting of the Hospital Service Plan Commission of the American Hospital Association at Chicago, October 4, Arizona was granted a Blue Cross Hospital Plan. The groundwork for this recognition was laid when the Board of Directors of the Associated Hospital Service of Arizona met in August and secured the services of L. Donald Lau of York, Pennsylvania as their Executive Director. Mr. Lau comes to Arizona with a full knowledge of the Blue Cross. Application was made immediately to the Hospital Service Plan Commission and Wm. L. McNary, Executive Director of the Colorado Hospital Service, and a member of the Commission, offered his services to the Arizona group to insure the recognition by the national organization at this October meeting. Mr. McNary flew to Arizona to spend September 20, 21 and 22 in Phoenix. As he organized the Colorado plan six years ago, and has been their executive director during these years, his advice was invaluable. Arizona, accepting his suggestions and the results of his experiences in Colorado, has adopted the Proposed National Contract for Blue Cross Plans. This contract has just recently been adopted by the state of Indiana. In the opinion of the commissioners, it is the ideal contract, drawn from the provisions of all the other 80-some Blue Cross Plans in operation. Under the provisions of this contract, subscribers may join in employed groups of not less than 5. The rates are 85c a month for a single person, $2 a month for a family, regardless of the number, under 19 years of age. The benefits provide 21 days hospital care the first year, 25 days the second year, and 30 days each succeeding year.

While the Blue Cross is entirely new to us in Arizona, the entire medical profession should familiarize themselves with the full meaning of what this service means to the public. Undoubtedly there will be some things about it which, as a profession, we will not like. But if we are

to accept the experiences and judgment of those connected with Blue Cross organizations, and the popularity of this hospital service where it has been established for a number of years, the benefits far, far exceed the few faults that creep in here and there.

To give some idea of the vastness of these organizations, the first plan is 15 years old. Today there are over 80 in operation. Belonging to these plans are over 16 million subscribers, or one out of nine of the entire population of the United States. In the first half of 1944, 2 million subscribers were added, which gives some idea of the rapidity with which it is spreading. Three thousand hospitals in the United States belong to the Blue Cross, and these hospitals represent 92% of the available bed space for the public in the whole nation. In 1943 the Blue Cross paid the hospitals $70,000,000 which equaled 20% of their *gross* income. This included 200,000 obstetrical deliveries. A distinct advantage of Blue Cross service over ordinary commercial companies is that these companies cover the employees only, while Blue Cross takes the employers and their entire families. Statistics show that women require 50% more hospitalization than men, which explains some of the popularity of Blue Cross.

There are some interesting facts about the Colorado Hospital Service. It has been in existence 6 years. The population of Colorado is 1,100,000. There are 260,000 subscribers in the State, or 1/4 of its population and there are sixteen member hospitals.

The Arizona organization is progressing rapidly. M. Lee Astor of St. Louis, Missouri, has been made assistant director to Mr. Lan. Mr. Astor comes from the Blue Cross organization in St. Louis. Contracts are being signed with the hospitals of the state, and groups of subscribers will be added as rapidly as employed groups can be contacted.

Blue Cross Hospital Service is part of the answer of the American Medical Profession to the threat of federalized medicine. It is voluntary, pre-paid, non-profit hospital service, and this has been approved by the American Medical Association. It should have the undivided approval and support of every member of the profession in Arizona.

American Hospital Association

CEREBRAL PALSY VICTIMS NEED NATIONAL HELP

Cerebral palsy, more devastating in its crippling effects than infantile paralysis, affects seven out of every 100,000 of population, yet children so crippled are the most neglected group of all handicapped children.

This statement is made by Paul A. Salisbury, pharmacist's mate, 3/c, United States Navy, writing in the April issue of HOSPITALS, journal of the American Hospital Association. Salisbury in civilian life was director of physical therapy at Huntington, West Virginia, Orthopedic Hospital.

While the March of Dimes and the National Foundation for Infantile Paralysis, together with the work of Sister Kenny, have stirred the imagination and won the support of the public with reference to infantile paralysis, Salisbury writes, most people know nothing of cerebral palsy, its incidence, or the great need for care of its unfortunate victims.

The result of damage to the brain sustained either before, during, or after birth, cerebral palsy afflicts each year seven children born in every 100,000 population unit. Of this number, one will die during infancy or shortly after, Salisbury points out. About 25 per cent of the surviving children are too severely handicapped to be rehabilitated, but it is estimated that in this country there are 70,000 cerebral paralyic children who can be rehabilitated.

"This does not mean they can be completely cured," according to the author, "but that the majority of them, with proper medical and educational methods, can become partially or wholly self-sufficient instead of remaining helpless invalids."

While only four states have what may be callde an adequate state-wide program for cerebral palsy, the only permanent solution is for each state to establish a centrally located treatment center and for each city or county to esablish cerebral palsy societies, the author believes, all banded together by a national parent organization to carry on a program of orthopedic treatment, specialized physical therapy and occupational therapy, special teaching methods, sight and hearing correction, speech correction and training, and vocational guidance.

Washington News

DR THOMAS PARRAN, ON PLANNING MEDICAL FACILITIES

In his testimony before the U. S. Senate Sub-Committee on Wartime Health and Education, Claude Pepper, Chairman, Dr. Parran declared that "there is found an extensive need for new hospital facilities in order to provide necessary hospital care." The estimated cost of the program suggested by the Surgeon General was $1,989,000,000. He summarized his estimates as follows:

Recapitulation of Health Facility Estimates

New general hospital beds	100,000	
Replacement general beds	66,000	
Total....	166,000	
@ $6,000 per bed		$ 996,000,000
New mental hospital beds	94,000	
Replacement beds	97,000	
Total....	191,000	
@ $3,000 per bed		$ 573,000,000
New tuberculosis beds...	44,000	
Replacement beds	16,000	
Total....	60,000	
@ $5,000 per bed		$ 300,000,000
Public Health Facilities		
District health centers.	1,200	
Dist. health sub-centers	1,200	
Total estimate....		$1,989,000,000

Dr. Parran, commenting further on the need of a national program "to provide full health medical service for all the people" said:

"At the present time the prepaid insurance plans of the Blue Cross are the most important voluntary effort in meeting the cost of hospital care. These plans now cover nearly 15 million subscribers. Since the movement is relatively young, its potentialities as an instrument for making hospital care more universally available are somewhat unpredictable. Undoubtedly the Blue Cross as a private voluntary movement has won a place in the American way of life. The plan, however, would seem to have definite limitations. It does not seem applicable to the large low income group of the population, nor to those unemployable by reason of physical infirmity. It is these groups that have always constituted the major financial burden on the voluntary hospitals.

"In my opinion, one of the first approaches to a solution of the national health program would be a program of Federal assistance to the States for the medical and hospital care of the low income group. A program of this nature would include not only the care of acutely ill persons but also the care of chronic disease which is very largely a part of the same social problem."

"Expert Medical Testimony"

A recent note in the April 1 issue of the "Journal of the American Medical Association" comments favorably on the attitude taken by the Minnesota State Medical Association, which three years ago appointed a committee on medical testimony to which could be referred instances in which physicians had given questionable testimony. This committee, after investigation and according to the facts, "may censure the physician, may publicize the circumstances of the particular case, or may bring the matter to the attention of the state board of medical examiners for disciplinary acion." A case is cited that had been investigated by the committee and referred to the board of medical examiners; the testifying physician, having been adjudged to have given unjustified testimony, was censured.

So-called "expert medical testimony" as given in court has long been a just cause of embarrassment to physicians, who consider much of it to be a discredit to a generally honored profession. There are no undisputed rules by which qualification as an expert can be judged, and contradictory testimony is frequently given by presumably equally qualified physicians. Furthermore, neither the medical profession nor the legal profession has interested itself in this important problem to the point of actually seeking result.

The concluding paragraph of the note in the "Journal of the American Medical Association" is worth reprinting for its uncompromising clarity.

> "Next to saving life and giving aid to the sick and injured, no greater responsibility devolves on the medical profession than giving testimony in court or elsewhere. The right of a physician to continue in the practice of medicine is measured no tonly by his professional competence as a physician but also by what he says and does as a physician."

In 1936 the Council of the Massachusetts Medical Society appointed the Committee to Consider Expert Testimony, thus anticipating the action of the Minnesota State Medical Association by five years. Unfortunately, although the Minnesota committee appears to be

functioning in a spirited and effective fashion, the only fruit that this appointment has borne in eight years has been an occasional meager report of progress. Meanwhile the battles of the "experts" continue.—*Editorial in New England M. J., June 1, 1944.*

The Story of DDT (Dichlor Diphenyl Trichlorethane)

The discovery and development of the sulfa drugs and of penicillin form some of the most romantic and spectacular chapters in the history of man's struggle to conquer his baeterial enemies. Now comes a parallel tale, equally romantic, of a substance which promises to be as effective against insect pests as the surfonamides and penicillin are against bacteria. Aecording to Geigy Company, Inc., of Basle, Switzerland, and New York, DDT was synthesized in 1874 by a yomng German chemistry student in routine preparation of a thesis. Its formula was recorded in the Proceedings of the German Chemical Society, where it remained in obscurity until recently. Several years ago a scientist of J. R. Geigy of Basle, Switzerland, synthesized the product and discovered its miraculour insecticidal composition. In 1939 the potato crop of Switzerland was threatened by the Colorado potato beetle. DDT brought the destructive potato beetle under control. Further experimentation demonstrated its effeetiveness agains many other agricultural pests. Outstanding among the discoveries made by Geigy was the fact that DDT was an amazingly potent substance against the typhus carrying louse and that its lousicidal properties were long lasting. This information was imparted by eertain United States authorities when this country entered he war, and a quantity of the material was imported for experimental purposes. Intensive study was carried on in many parts of the United States and North Africa with the result that DDT was ready for use when a typhus epidemic threatened in Naples, Italy, shortly afterf the liberation of that city.

Speaking of the development steps leading to its adoption for Army use, Colonel Ahnfeldt, Directory, Sanitation and Hygiene Division, Office of the Surgeon General, states that after a great many toxicologic stndies the safety of DDT was established and a mixture of 10 per cent DDT in pyrophyllite was decided upon. "This powder," he states, "is packaged in a 2-ounce can, and distributed on a basis of 1,000 cans per 1,000 men per month to troops in areas where louseborn eepidemie typhns exists. Each soldier earries a can in his pack, and the powder is applied by dusting it onto the inner surfaee of the nndrewear before he does the garment, paying particular attention to the seams."

By means of a hand "flit" gun fitted with a rubber nozzle, or powder dusters utilizing compressed air, Colonel Ahnfeldt states that mass treatment of large numbers of persons daily is possible. Thus at Naples as many as 50,000 persons daily during the threatened typhus outbreak were dusted, and altogether a total of two and one-quarter million persons were delonsed.

The epidemie was stopped and no American soldier in Italy was reported as having develoPed typhus.

An emulsion of DDT has been prepared which can be used to impregnate clothing and has been shown to retain its lousicidal effectiveness for a month or more and through eight launderings.

Walls and ceilings sprayed with a DDT composition kills flies for three months. Cattle can enjoy comfort by being freed from flies, and fleas can be eradicated from eats and dogs for long periods of time. One spraying of a bed will protect it against bedbugs for as long as 300 days. These are but a few of the domestic uses to which DDT will undoubtedly be put after the war's end.

The list of agrienltural pests against which DDT has already been found to be effective is a long one and cannot be recited in detail here. Suffice it to say that the farmer and fruit grower have a new era to look forward to when supplies can be diverted from military to civilian use.

Further experimenting will, of course, have to eome before the full uses of this remarkable chemical will be uncovered. Possibly some undesirable effects, such as killing insects like the honey bee, which are not pests, may have to be coped with; but certainly it has already been amply demonstrated with the benefits to mankind by protecting him against insect-borne diseases, and by saving him millions of dollars annually in crop protection are enormous.

Reprinted from the Journal of the Iowa State Medical Society, September, 1944.

Prepaid Medical Care A La Kaiser

The Permanente Foundation Hospital has recently published its first annual report. Starting with 6 physicians and 6 nurses on Mareh 1, 1942, it opened offices in Oakland, California, and began to render industrial medieal care to 20,000 men of two of the Kaiser shipyards. By the end of February, 1943, it was serving 90,000 workers and comprised a staff of 62 doctors, 241 nurses and 324 miscellaneous employees. It then had available 209 hospital beds, and construction of a 100-bed addition was begun later in the year. Three issues of the "Permanente Foundation Bulletin", which contain eighteen papers reporting clinical experience at the hospital by members of its staff, had

Reprinted from the New England Journal of Medicine, August 24, 1944.

already been published, and many other articles have appeared in various medical journals. These indicate a high standard of medical practice.

Some of the features of the report are worthy of study by all those interested in improving the standards of medical care and in providing it at a low cost to low-income and moderate-income groups. The history of the Permanente Foundation, its relations with the local medical profession, its financial statement and the medical services that it offers are reported in some detail. Some excerpts are as follows:

> Our medical service and the Foundation were necessitated by the same motivating force that created the medical program for the armed services. That force was the dislocation of masses of people to areas where existing medical and hospital services were inadequate.
>
> We find that, where production for war created tremendous shifts in population, in the majority of instances medical and hospital care for these people was entirely forgotten. This was not so, however, where the armed forces directly entered production; for example, in Navy shipbuilding yards, Navy physicians, in uniform, were responsible for the care of the workers' health. When private industry was given the job, no such care was provided.
>
> The Kaiser organization had . . . a knowledge acquired from past experience in providing medical and hospital care in industry (It) had been engaged prior to the war in building huge construction projects in isolated areas, such as Coulee Dam. With no pre-existing medical and hospital facilities available, these had to be provided to the many people employed. By trial and error, a method of highly satisfactory service was worked out through the years. After Pearl Harbor when the influx of war workers into the Richmond-Oakland area created a similar lack of hospital and medical facilitie, it was evident that the tested solution which experience and time had proven efficient should be put into effect.
>
> As a result Permanente Foundation was born. A charitable trust, with a Board of Trustees, headed by Mr. and Mrs. Henry J. Kaiser, registered in Alameda County, California, was set up in such a manner that there would be no profit incurred by anyone in the Kaiser organization. Any funds that may be accumulated by the Foundation must be used only for such charitable purposes as: medical research, provision of facilities in needy areas, medical care for the poor, rehabilitation of men returning from the war and so forth.
>
> Economically, the results have been rather amazing. In spite of wartime difficulties, with the associated high cost of supplies and high salaries, while receiving only pre-war income from the employees, the Foundation has accomplished the following: retired $500,000 of the debt of $700,000 incurred in building and equipping its hospitals; paid physicians' salaries ranging from $4800 to $14,000 and totaling $500,000 per year; paid a similar total to staff nurses at the rate of $150 to $200 a month; provided the health-plan members with one of the mos tcomprehensive coverages ever attempted; and treated a group of people definitely below par physically. No physical examinations were possible under union contract, but even if permitted, the shipyards would have been forced to employ practically all these workers because of the shortage of manpower.
>
> The report goes on to mention the distrust with which the medical profession first looked on this financial plan. Gradually the profession became more tolerant as they recognized the tremendous load that the organization was carrying and the extraordinary conditions under which its job was being done.
>
> The author of the report also goes on to discuss the future of the organization and the factors on which its continued existence must depend. The advantages to the workers and to the physicians of maintaining this or a similar medical service are enumerated. Details are also given concerning the quantity and quality of medical care furnished during the period covered by the report.
>
> This report makes impressive reading and warrants more than a glance by physicians who are interested in the socioeconomic aspects of medical practice. Those who are now actively concerned with the problems of prepaid health and medical care insurance may find it useful to adopt some fo these methods and principles in order to obtain the most effective and efficient medical service to large numbers of people at low cost—and at the same time to maintain the high standards and dignity of the medical profession.
>
> The conditions that make possible the establishment and maintenance of such an organization, however, appear to be comparable to those that occur in the Army and the Navy; that is, a large number of people in relatively good financial standing are herded into a new environment. What will happen when this wartime industry is disbanded or decentralized? How can this type of service be adapted to communities where reasonably adequate medical and hospital facilities already exist, where many of the inhabitants see khospitalization in terms of race and religion as well as medical competence and where they are working under the usual ups and downs that characterize small or moderate-sized industries? Can established practitioners and specialists adapt themselves to this type of medical care without serious disruption of such

services? These are merely a few of the problems involved in adapting the Permanente set-up to the one hundred and thirty million people of this country and to the doctors who must serve them.

THE USE OF DIETHYLSTILBESTROL TO CONTROL UTERINE BLEEDING

By KARL JOHN KARNAKY, B.A., M.D.
Houston, Texas

The writer and his co-workers have been interested in the use of dithylstilbstrol as a means to control abnormal uterine bleeding since 1938, and published the first paper on this subject in the American literature.

The phenomena of normal menstruation and dysfunctional uterine bleeding are defined simply as fluctuations of a blood estrogenic bleeding level. If the estrogenic blood level of a patient is above or below certain limits she will remain amenorrheic, for certain limits she will remain amenorrheic, for example: before puberty, between the menstrual periods, during pregnancy, and after the menopause. Contrariwise, if the blood estrogenic level is elevated into the limits of this quantitative bleeding level, or the higher blood estrogenic level is lowered into the upper limits of the bleeding level, the patient will experi-degree and rhythm of uterine bleeding are primarily dependent upon intrinsic factors influencing the elevation or lowering of the blood estrogenic level.

OVARIES AND NORMAL AND ABNORMAL UTERINE BLEEDING WITH AND WITHOUT MYOMAS

Believing that the ovaries might be the only cause of uterine bleeding with or without myomas, the author selected for experimental cases six patients, four with multiple myomas and an associated abnormal menstruation, and two with tubo-ovarian abscess, and normal menstruation.

Only the ovaries were removed. The two patients with normal menstruation bled one more time. The four wiht myomas stopped bleeding in 2 to 8 days. All of these patients have been under observation for from one to five years and so far not one has bled or menstruated. In passing it may be better, due to the lower mortality, to remove just the ovaries in bleeding cases without or with small myomas.

Also 400 consecutive cases with multiple myomas and associated uterine bleeding were given from 5.0 to 25.0 milligrams of diethylstilbestrol daily for 10 to 60 days.

All stopped bleeding, just like those cases without myomas, except 8 cases. The cases had endometrial polyps or intro-uterine myomas.

We can fairly conclude that the ovaries instead of the uterus are the cause of uterine bleeding.

If one should diagnose every case of abnormal uterine bleeding as dysfunctional, he would be right in 95 per cent of the cases, excluding incomplete abortions. Four and nine-tenths would be mechanical and less than one-tenth blood dyscrasia.

SIDE-EFFECTS AND TOXICITY

Diethylstibestrol, while a tremendously valuable therapeutic adjunct, unfortunately exerts certain unpleasant side effects which preclude its wider usefulness in gynercic therapy. Nausea, with or even with large doses. Eighty-nine per cent of our sries of patients, 2,866 cases, were able to continue its use after a transient nausea which left in four to five days. The remaining eleven per cent, 354 cases, continued the diethylstilbestrol with a persistence of some minor nausea which was ultimately controlled by elixir of phenobarbital. In but 5 cases, 0.15 per cent, was it necessary to halt the use of stilbestrol because of severe gastro-intestina upsets. In all the 3,227 cases in this series, the side-effects disappeared when the drug was discontinued after it had accomplished the purpose of its original indication.

We have administered large, unphysiological and experimental doses of diethylstibestrol, one hundred to three hundred and eighty days without the patient experiencing any physical changes other than amenorrhea.

Huge quantities of diethylstibestrol were given by Davis to three women with wide-spread terminal malignancies. He was unable to report any pathologic changes from the drug. Others have similarly failed to demonstrate toxic or pathological changes from large doses of diethylstilbestrol.

THE MODE OF ADMINISTRATION

Diethylstibestrol, when given orally, is best begun with evening doses. It is most important to explain to the patient that she should call her physician if untoward symptoms develop. If nausea is present the patient is urged to continue taking the medication and she is assured that the symptom will diminish and leave in four to six days. It may be necessary to severely nauseated cases to prescribe a sedative or even larger doses of vitamin C along with diethylstilbestrol.

Intramuscular injections of diethylstibestrol in cottonseed, corn, sesame, or olive oil may be necessary when large and immediate doses of the drug are indicated. These injections may be given in the lateral surface to the thigh or intracervically into the anterior cervical wall musculature.

TREATMENT OF DYSFUNCTIONAL UTERINE BLEEDING

Uterine bleeding with or without myomas

(a) If the bleeding is severe, or has been present over a long period of time, or both conditions are present, and the patient is in poor physical condition from the loss of blood, give 10.0 to 15.0 to 50.0 milligrams of diethylstilbestrol in the anterior wall of the cervix or by mouth every 15 minutes until the bleeding stops, then 5.0 to 10.0 milligrams every night for thirty to forty nighth. If the bleeding recurs during the treatment, repeat the diethylstilbestrol every fifteen minutes until bleeding ceases, but continue to give 5.0 to 10.0 milligrams every night.

(b) If the bleeding is not severe or prolonged, give one 5.0 milligram tablet every night for thirty to forty nights.

(c) If the bleeding is not severe or prolonged, give one 5.0 milligram tablet every night for thirty to forty nights.

(c) If the bleeding has halted or is about to stop, the patient is given 0.5 milligrams of diethylstilbestrol by mouth for two days, 1.0 milligram for two days, 4.0 millivrams for two days and 5.0 milligrams every night thereafter for thirty to forty nights. By giving diethylstilbestrol in this manner the incidence of nausea is lessened.

without vomiting, appears to be definitely related to the size of the dose of diethylstibestrol. One may conclude, therefore, that intestinal allergy to the drug is rare. True allergic changes reported have included exfoliative dermatitis.

In our experience with 3,227 cases it has been generally unnecessary to terminate the use of dil ethylstilbestrol because of nausea and vomiting.

In two to eight days after taking the last tablet the patient may spot for two or three days, bleed two or three days, then spot for two or three days. If the amount of uterine bleeding becomes more

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than that of her normal menstruation, the patient takes one-half of a 5.0 milligram tablet of diethylstilbestrol every fifteen minutes until the bleeding is checked (not stopped). Within fourteen to twenty-one days the patient usually returns to normal menstruation.

Patients with large myomas which need to be removed can be kept amenorrhheic until ready for surgery.

It is important that non-coated tablets of diethylstilbestrol be used because it required 8 minutes for the non-coated and 8 hours for the coated tablets to dissolve. Eighty-six cases of adolescent dysfunctional uterine bleeding were treated by this method. They are all menstruating normally at present. Not one had to have a dilatation and curettage to stop the uterine bleeding.

One hundred and forty-two private cases of dysfunctional uterine bleeding have been referred to the author. Bleeding was controlled in all cases with diethylstilbestrol. Not one patient has had to have a hysterectomy. They all have had from one to nineteen endometrial biopsies with a Randall curette. Twenty-three women experienced a recurrence of the bleeding within three years, but all were again controlled with diethylstilbstrol, lipooiodine and thyroid.

In 584 charity cases we have performed 34 hysterectomies. More hysterectomies were done in the charity group because these patients could not return for their treatments, and they usually had from two to ten children depending on them.

We have used the estrogen plus corpus luteum ence bleeding from the endometrium such as that during normal and abnormal uterine bleeding. Tne therapy for others, but found that corpus luteum is not necessary.

ADOLESCENT DYSFUNCTIONAL BLEEDING

Severe or prolonged bleeding should be treated with stibestrol (five 5.0 milligram tablets, 25.0 milligrams, every 15 minutes until the bleeding stops, followed by 5.0 to 10.0 milligrams every night for 30 to 40 nights; if the bleeding recurs during the treatment, repeat the stilbestrol). If the bleeding starts again after 3 to 4 weeks, repeat the course of treatment.

Slight bleeding is an indication for one 5.0 milligram tablet every night for 30 to 40 nights. If the bleeding has stopped, or is very slight, one may use Finch's method.

Within 2 to 8 days after taking the last tablet, the patient will spot for 2 to 3 days, bleed for 2 to 3 days and then spot again for 2 to 3 days. If the bleeding becomes more than that of a normal menstruation, the patient takes one-half of a 5.0 milligram tablet every 15 minutes until the bleeding decreases. Do not stop the flow, but decrease the flow to that of normal menstruation. Within two to three weeks, the patient usually returns to normal menstruation.

MENORRHAGIA, ADULT

The uterus should be curetted well in cancer age patients after the bleeding has been controlled with stilbestrol, which only takes 6 to 24 hours. All the tissue should be sent to a competent pathologist for diagnosis.

Cases of menorrhagia seen during the active bleeding stage are treated by the injection of 25.0 to 50.0 milligrams of stilbestrol into the anterior wall of the cervix. Twenty-five milligrams of stilbestrol are given orally every 15 minutes until the bleeding stops, followed by one 5.0 milligram tablet every night for 40 to 60 nights. If bleeding starts during the taking of the daily tablets, then 5.0 milligrams are taken every 15 minute suntil the bleeding stops. The nightly tablet is continued.

If the patient is seen after the bleeding has stopped, use Finch's dosage until 5.0 milligrams are being taken daily. Five milligrams are taken each day for 20 to 30 days.

METRORRHAGIA AND SPOTTING

Metrorrhagia and spotting can be easily controlled with diethylstilbestrol. One five-milligram uncoated tablet is administered nightly for a period of thirty to forty nights. It is obvious that patients in the carcinoma age must have this diagnosis ruled out after the bleeding is controlled with stilbestrol.

There were 29 cases of uterine bleeding at the menopause with and without myomas. Dilatation and curettage in the hospital revealed no malignancy so they were treated like dysfunctional utrine bleeding at adolescence. These are under close observation.

In this entire series of over 556 patients with dysfunctional uterine bleeding it was necessary, in fifteen patients, to resort to dilatation and curettage to stop the uterine bleeding. These cases were bleeding from mechanical, no dysfunctional, causes. These diagnoses included endometrial polyps, intrauterine and submucosal myomas and/or endocervical polyps. All of the remaining patients with dysfunctional uterine bleeding were controlled with diethylstilbestrol.

It is our practice to administer desiccated thyroid substance, or proloid and lipiodine to all patients giving a presenting complaint or abnormal uterine bleeding. Our course of therapy with thyroid or proloid is initiated with one-fourth grain every morning. This dosage is increased by one-quarter grain, every fourth morning, until the patient's pulse range averages 100-110 per minute. This individual dosage level, per patient, is maintained at least for one year. The level required in the large majority of cases is one-half to one grain per day. One tablet of lipoiodine is given every morning for sixty mornings.

Diethylstilbestrol can g eused for uterine bleeding in incomplete abortions, and bleeding during and immediately after delivery.

CONCLUSION

Diethylstilbestrol is a mon-harmonal drug which has been found, by clinical trial, to be highly effective in the treatment of dysfunctional uterine bleding (oligo-hypo-hyper-poly and amenorrhea), regardless of the type of endometrium. It is as efficient when taken orally as by the intramuscular route. It is as efficient when taken orally as by the intramuscular route. It is inexpensive. When it is imperative to halt severe bleeding rapidly the drug may be administered directly into the anterior wall of the cervix. For dysfunctional uterine bleeding, 5.0 milligrams of diethylstilbestrol are given at 9:00 every night for 30 nights. If bleeding ever starts during the time the patient is taking 5.0 milligrams every nighht, then she is to take 5.0 milligrams every 15 minutes until the bleeding stops, but she is to continue the night tablet.

One might conclude that there are too many hysterectomies being done because of dysfunctional uterine bleeding with or without myomas. Since diethylstilbestrol, uterine bleeding is a rare indication with us for hysterectomy. Diethylstilbestrol is like the surgeon's knife: if one learn to use it, it is a great asset to the healing of the sick.

Diethylstilbestrol is a non-toxic drug. It can be safely given in large doses for three to six months. Its use obviates the need for many hospital curettements in women or girls below the carcinoma age. It is a valuable adjunct to the gynecic therapeutic armamentarium.

Diethylstilbestrol is to uterine bleeding what the sulfa drugs are to infections.

Remember, it is impossible to hurt anybody by giving large and continual doses of stilbestrol.

One of the most important uses of stilbestrol is in cases of large myomas (fibroids) and uterine bleeding. One can give 5 to 25 mgs. of plain stilbestrol tablets every 15 minutes until the patient stops bleeding (bleeding stops in 2 to 24 hours). And then 5 to 25 mgs. can be taken every night by mouth at home. If the bleeding ever begins while the patient is taking stilbestrol she is to repeat the stilbestrol every 15 minutes until bleeding stops, but the night dose is continued. Someone mentioned cancer and stilbestrol in humans. We have been unable to find stimulation in 17 cases of epidermoid carcinoma of the cervix and 12 cases of adenocarcinoma of the fundus. We have given huge and prolonged doses of stilbestrol t oover 1,000 patients and these had an operation where tissue studies were done by a competent pathologist. In these we found no evidence of malignant stimulation. I am of the firm opinion that it is impossible to humans to producce malignancy with stilbestrol.

PROGRAMS OF MEDICAL MEETINGS

MARICOPA COUNTY MEDICAL SOCIETY,
October 2, 1944

1. Book Review "Climate Makes the Man"
 by Dr. Clarence Mills
 Presented by Dr. H. L. Franklin
2. Film on Rabies

PIMA COUNTY MEDICAL SOCIETY,
October 7, 1944

1. "The Tuberculosis Service at the Pima County General Hospital"
 by Dr. W. H. Oatway, Jr.
2. "Needs and Prospects in the Arizona Tuberculosis Situation"
 by Dr. Benson Bloom

ST. MONICA'S MOSPITAL, PHOENIX,
September 13, 1944

1. Fatal Case of Human Rabies
 by Dr. Mathew Cohen
2. Case of Aneurysm of the Cerebral
 by Dr. D. F. Zito

Oetober 16, 1944

1. Extensive of Face Injury Case
 Presentation by Dr. E. Payne Palmer
2. Definition of the R. H. Faetor
 by Dr. Raymond Jennett
3. Report of a Case of Gastrie Hemorrhage
 by Dr. Lueille Dagres

ST. JOSEPH'S HOSPITAL,
October 9, 1944

1. Myelography
 Presented by Dr. M. S. Dirks
2. Case of Acute Lymphatie Leukemia
 Presented by Dr. T. Moran

GOOD SAMARITAN HOSPITAL STAFF,
September 25, 1944

1. Case of Congenital Fetal Heart Bloek
 by Dr. Fred Jordan
2. Diagnosis, Bronchography and Surgical Treatment of Suppurative Lung Disease
 Presentation of Clinieal Cases.
 Dr. Howell S. Randolph

October 23, 1944

1. Congenital Hare Lip
 Dr. J. M. Ovens
2. Septic Abortion
 by Dr. C. L. McVay

UROLOGY AWARD

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary, for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming June meeting of the Ameriean Urological Association.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before Mareh 15, 1945.

Dr. John W. Flinn

Whereas, God, in the fullness of time, has seen fit to call to a higher sphere of usefulness, Dr. John W. Flinn of Preseott, Arizona, an active charter member of this Soeiety, and

Whereas, his pioneer work in Tuberculosis, his studious habits and his many valuable eontributions to the scienee of medicine, have gained him national, as well as loeal reeognition, and,

Whereas, his civic pride found expression in many local and state societies and assoeiations and he was a past president of this Society, The Arizona State Medical Assoeiation and President of the Preseott Community Hospital Staff, and,

Whereas, his Christian fortitude eharaeterized him as an exemplary eitizen and devout Communieant,

Therefore be it resolved:

That the members of the Yavapai County Medical Society mourn the loss of an able member, a capable physieian and loyal eitizen, and be it further resolved,

That the Secretary be instrueted to spread

these resolutions in the minutes of the Society and that a copy be sent to the relatives of the deceased and copies furnished the Arizona State Medical Association nad the American Medical Association.

C. R. K. Swetnam,
Robert N. Looney,
C. E. Yount.

Committee for the Yavapai County Medical Society.

MEDICO - LEGAL MEDICINE

May 22, 1944

IN THE SUPREME COURT OF THE STATE OF ARIZONA

UDALL, Superior Judge:

The petitioner, Paul Hoffman, on February 15, 1940, while working for Paul M. Brophy on a farm near Casa Grande, Arizona, was injured in an accident compensable under the Workmen's Compensation Law (Articcle 9, A. C. A. 1939). The respondent employer carried industrial insurance with the Industrial Commission of Arizona, as insurance carrier.

Timely application was made by the petitioner to the Industrial Commission for compensation, and on June 28, 1940, it awarded him compensation for temporary total disability. Petitioner protested the award and the Commission made amended awards and findings on May 3, 1943, May 24, 1943, and September 9, 1943. The third amended award, made on the date last stated, recited that compensation for the temporary total disability had been fully paid, and then found "said injury caused also a permanent partial disability equal to 25% of a permanent total disability, entitling said applicant to compensation therefor in the sum of $7.63 monhly during the life of said applicant." The award was in accordance with this finding and the petitioner being dissatisfied therewith has brought them before this Court for review.

Petitioner attacks the award in this case on three grounds: (1) That the findings are legally insufficient to sustain it, (2) That the commission used an illegal method in evaluating the evidence and determining the ultimate facts, and (3) That the evidence, properly considered, is insufficient to sustain the findings.

The accident in which petitioner was involved occurred while he was loading commercial fertilizer. He fell from a trailer on to the trailer hitch, striking his lower back and spine, causing bruises and contusions in the lumbar region of the back. While the X-ray disclosed no visible fracture, there was definite evidence of injury to the twelfth dorsal vertebra. The injured man was first treated by a Doctor at Casa Grande, and the next day he was removed by ambulance to the Pinal County Hospital at Florence, where he remained for some seventeen days.

Between the date of the injury and the final award the petitioner was treated or examined by some fourteen reputable physicians, several of whom were of his own choosing.

Numerous X-rays were taken, pathological laboratory tests made, and all that modern medical science could do for him was done, at the expense of the Commission. A Medical Rating Board, paid by the commission, but chosen in part by the petitioner or his attorney, first gave him a "functional physical disability" rating or 5%, and later on this was increased to a 25% disability.

It appears from the record that the petitioner, who was then forty-eight years of age, enjoyed good health prior to the injury, and was able to do all kinds of heavy manual labor. He stoutly maintains that he has been unable to do any gainful work since the time of the injury, that he suffers pain constantly, that his earnings have been practieally nil, and that he has subsisted only by reason of the generosity of relatives and friends, with some aid having been received from public charitable agencies. There is some evidence that he could do light work such as dish washing, poultry raising, etc.

There is a slight conflict as to the amount of the monthly wage paid petitioner prior to his injury; it ranged from $55.00 to $61.00, which included an allowance for house rent. While there is no explicit finding by the commission as to his earnings, from the award it can be mathematically determined that the Commission found that his wage was $55.50 per month. There is no finding as to the monthly wage the petitioner was able to earn thereafter.

From the nature of this injury it is readily apparent that it falls under Sec. 56-957, subdivision (c), A. C. A. 1939, which is the same as what is referred to in the earlier cases as "subdivision (w)" of paragraph 1438, Revised Code 1928. In the law reports this type of injury is frequently referred to as "other cases" or "odd-lot cases", as distinguished from the "scheduled injuries" enumerated under Sec. 56-957 (b). The statute, sub. (c) of Sec. 56-957, is clear and unambiguous, and is as follows: viz:

> "In cases not enumerated in subsection (b), where the injury causes partial disability for work the employee shall receive, during such disability, compensation equal to fifty-five

(55) per cent of the difference between his average montly wages before the aecident and the monthly wages he is able to earn thereafter, but the payment shall not continue after the disability ends, or the death of the injured person, and in case the partial disability begins after a period of total disability, the period of total disability shall be deducted from such total period of compensation."

The statute just quoted states explicitly of what the award shall consist. It is 55% of the difference between the claimant's monthly wages before the accident and the monthly wages he is "able to earn" thereafter.

Zager v. Industrial Commission, 40 Ariz. 479, 490, 14 P. ad. 472;

Kilpatrick v. otel Adams Co. 42 Ariz. 128, 132, 22 Pac. 2d. 836;

Six Companies, Inc., v. Industrial Commission, 42 Ariz. 501, 27 Pac. 2d. 678;

Ossie v. Verde Central Mines 46 Ariz. 176, 188, 49 Pac. 2d. 396.

While such a determination may present substantial diffieulties due to the fact that it is impossible to determine with mathematical cerainty the exact extent of the loss of earning power when it is only partial in its nature, yet he Commission, however, in discharging this duty is not left wholly without guide posts to point the way, for the very next paragraph of the code, subdivision (d) provides:

"In determining the percentage of disability, consideraiton shall be given, among other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, and the age of the employee at the time of the injury . . ."

In the Zagar and Six Companies, Inc., eases, supra, we have held that the true meaning of "percentage of disability", referred to in sub. (d), supra, is "the percentage of disability to earn his former mages."

The objection most vigorously urged here by the petitioner is that the Commission in performing its quasi-judicial function of making this award fell into the error of accepting the percentage of "functional physical disability" fixed by its Medical Rating Board as being identical and controlling as to the "percentage of loss of earnings" suffered by the claimant as a result of the accident. It is further urged that the undisputed testimony of claimant and his witnesses as to "loss of earnings", as well as the other factors referred to under sub. (d), supra, were ignored and no consideration given them by the Commission as trierrs of the facts. If these charges be borne out by the record then the award must be set aside.

We ,of course, are not the triers of the fact, and we adhere to our oft repeated rule that if there is any competent evidence in the record to sustain the action of the Commission, it is conclusive and binding on this Court. Federal Mutual Life Insurance Co. v. Ind. Com. 31 Ariz. 224, 252 Pac. 512. If, however, the award was based and proceeds upon an erroneous and improper theory the above rule would not preclude us from correcting manifest error and preventing an injustice being done. We need not go beyond the Respondent-Commission's brief to determine the basis for this award:

At page 4:

"Records No. 13, 14, 16 and 25 conclusively show that the Commission accepted the recommendation of the Medical Board (Record No. 16), and based its findings of 25% disability upon said recommendation (Records 13 and 14), and computed the wage on the basis of $55.50 per month (Record 20)."

At page 3:

"Presumptively, this finding of 25% permanent partial disability is founded upon the report dated August 27, 1943, and signed by Chas. N. Ploussard, Louis B. Baldwin and F. M. Kilgard (Record No. 16), this presumption being supported by the memorandum of the members of the Industrial Commission dated August 21, 1943 (Record No. 25)."

At page 6:

"Concerning the only other essential finding, that is, the measure of the disability, the award (Record 13), and the action of the Commission (Record 14) rest and depend upon Record No. 20, wherein the Medical Board recommended an award of 25% of total disability."

And at page 10:

"It is clear that the compnesation award in this case is based upon the estimate of "functional disability" as determined by the doctors."

The documents referred to in above quotations, certified copies of which are now before us, amply sustain the admissions above made. It is also significant that in the hearing and re-hearings had in this matter that the award invariably followed the same percentage as fixed by the Medical Board. In other words, when the latter fixed a higher percentage of functional disability the award was correspondingly increased. The erroneous theory under which the Commission was then laboring is even more clearly disclosed by its adoption on January 3, 1944, under the authority granted by subsection (e) of Sec. 56-957, A. C. A. 1939, of a rule which in effect would have based the award in all cases such as this on percentage of "functional disability" as found by the Medical Board. We understand that this Rule has since been vacated.

We commend the practice of the Commission in having Medical Boards determine the "func-

tional disability'' of the claimant in all cases such as this, for this is one, but only one, of the important factors to take into consideration in determining the claimant's ''ability to earn''. However, all of the factors enumerated under sub. (d) supra, must also be considered, as well as the ''ohter things'' not named, which would disability and the percentage of loss of earnings. Each case must necessarliy stand upon its own bottom and be judged by the factors set out in the statute and ohters that are incident to a particular case.

It would doubtless be much easier and simpler for th eCommission in determining matters that come before it under the ''odd lot cases'' to blindly adopt the percentage fixed by the Doctors on ''functional disability'' as constituting the percentage of ''loss of earnings'', but that is not what the statutes require. Grave injustices to claimants would frequently follow such unwarranted procednre. It is the Commission's duty to follow the plain mandate of the statute, difficult though the task may be.

It is, of course, a rule that every injured person must seek to minimize his loss, and to put forth an active effort to procure such employment as he is able to. Utah Fuel Co. v. Ind. Com., 76 Utah 141, 287 Pac. 931. It may even be necessary that he change his former vocation. Savich v. Ind. Com. 39 Ariz. 266, 5 Pac. 2d., 779. The Commission should also be on the alert to weed out the malingerer, and the lazy and indolent should not be rewarded. The measure of the award in a case such as this is not the percentage of 'functional disability'', nor the amount of wages actually earned since the injury, but rather the loss of earnings caused by the injury. We think it clear, the legislature intended that the effect of the physical condition of the employee on his ''ability to earn'' was to be judged by the type of work he was doing at the time of his injury.

There is a matter of evidence, squarely raised by the appeal, deserving of comment which we mention for the guidance of the Commission: It should be kept in mind that medical evidence is only as to the physical injury or disability and not as to how that affects earnings. The latter issue is wholly outside of the knowledge of the averāge Doctor. Unless specially qualified, he could not testify as to an expert in this field, and medical testimony alone would be entirely incompetent to establish average monthly wages of claimant before the accident or the mouthly wage he is able to learn thereafter. In other words a Doctor, as such, cannot testify as to the percentage of industrial or economic impairment consequent on the loss of certain physical functions.

A case that covers the proper scope and evaluation of a Doctor's testimony is Silver King Coalition Min. Co. v. Industrial Commission of Utah, 69 Pac. 2d 608, 612, from which we quote as follows:

> ''Doctors cannot testify as to the economic fitness of an applicant to carry on certain work, unless they show that they are familiar with what is required in that work. For that reason, they cannot ordinarily testify as to the extent an applicant is industrially or logically have a probative bearing on the matter.

We certainly do not agree with the Respondent-Employer that it is obvious that in the vast majority of cases arising under the Act that the percentage of ''functional disability'' would be almost identical with the percentage of ''decreased ability to earn''. For instance, with the ordinary professional man or other ''white collared'' worker a back injury causing a 15% or 25% ''functional disability'' might not decrease his earning capacity at all; whereas, with a common laborer such a back injury might be nothing short of an economic disaster. There is no necessary parallel relationship between the percentage of general functional physical

> economically incapacitated. Price v. Industrial Comm. (Utah) 63 P. 2d. 592. But they may always testify as to the amount of loss of physical functions, if material * * * * and may give an opinion as to that ultimate fact and may give it in terms of a percentage of the full functioning as before the injury occurred. (Citing cases)
>
> ''Where the ultimate question is not one of loss of bodily function, but actual partial or total disability economically and industrially, as provided for in the first paragraph of section 42-1-62, R. S. 1933, and section 42-1-65, the loss of bodily function is only an aid to such ultimate question and the doctors should testify only as to such loss and not to the ultimate question of industrial or economic disability, except when the doctor qualified in addition to his medical knowledge that he has sufficient knowledge of what physical or mental abilities a certain occupation or vocation calls for, * * *''

By reason of the fact that it indubiably appears from the record that the award was predieated upon an erroneous and improper theory, and that the Commission used an illegal method in evaluating the evidence and determining the ultimate facts, we are vacating the award. The findings of fact are also very incomplete and leave much to be desired, which will doubtless be corrected on re-hearing. The award of September 9, 1943, is vacated and set aside and the case is remanded, with directions that further proceedings be taken in accordance herewith, using as a basis for findings the evidence already in the record and any other competent evidence that may be offered by any of the parties.

ORGANIZATION SECTION

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PRESIDENT'S MESSAGE

Activities

The Committee on Medical Economics has held interviews with the directors of the Associated Hospital Service of Arizona relative to the BLUE CROSS HOSPITAL SERVICE PLAN which the associated organization is sponsoring. As a result of the interviews, the Committee recommended to the Council that the plan be approved as filling a need for hospital service in Arizona. The Council thereupon approved the plan as outlined. In brief, the plan will admit subscribers from employed groups of 5 or more for prepaid hospital care. Rates are 85c a month for one without dependents, or $2.00 per month for a subscriber and family (spouse and children up to 19 years of age—large families included). Children in the family above 19 years of age may be included at an additional 85c each if they are dependent and unmarried. At present, 11 hospitals of the state are member-hospitals of this Blue Cross Service with others anticipated soon. Arizona is now one of the 41 states offering this non-profit, prepaid hospital service to its public. Your Committee has studied and endorsed the plan; the Council has sustained their recommendation. Keep the Committee informed on progress in your community.

The Committee on Scientific Assembly has the program for the Annual Meeting ready in skeleton form. The program outline is published elsewhere in this issue of Arizona Medicine. Note the dates on your calendar and plan now to attend this instructive and interesting meeting.

The Annual Conference of Secretaries of the state medical associations and Editors of their respective Journals is being held at Chicago,

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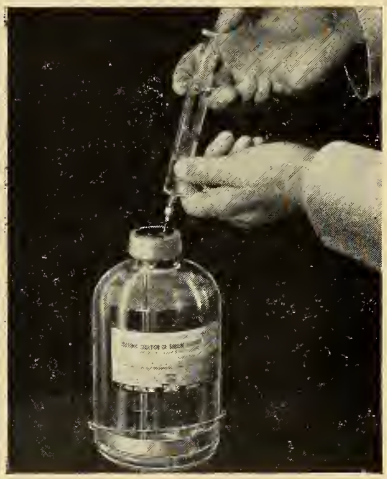
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under the auspices of the American Medical Association, on November 17 and 18. Attending from Arizona will be Dr. Frank J. Milloy, of Phoenix, Secretary-Editor for our Association and Journal, and Dr. Donald F. Hill of Tucson, Associate Editor of the Journal. Reports of the Conference will be found on other pages of this issue.

The Committee on Public Policy and Legislation called a conference for November 18 at Phoenix of parties interested in the progress of the Occupational Disease Law which was enacted at the last session of the state legislature. Attending will be the medical boards, representatives of labor, representatives from the small and large mining companies, representatives from the Industrial Commission, and others concerned with the provisions and operation of the Act. The purpose of the Conference is to clarify certain matters relating to the interpretation and administration of the law. It will be remembered that the Act was presented to the Legislature after conferences of these same groups, and with their respective endorsements. Our Association also conducted the previous conferences.

The law has been operating smoothly but, as with all new acts, there are items needing clarification. Our membership will be informed as to the results of this conference.

For personnel of the Committees, please see the roster in this Section (Organization) of the Journal and then keep them informed of any pertinent situations in which you feel they should be interested or to which they should give their attention. *Our Association does its work through its Committees, with the approval of the Council, not through the officers as such.* Hence, the county societies and members should contact the proper committee when some matter arises which needs attention. Some have inquired as to how matters of professional conduct or ethics are handled. Such matters should be referred to the Councilor for the district in question as it is the function of that officer to act upon such matters. He in turn lays the matter before the Councilors at Large should he need further advice, and has the final action of the Council for support of his findings.

DAN L. MAHONEY, M. D.,
President.

THE ANNUAL MEETING OF STATE SECRETARIES AND EDITORS

THE annual Conference of State Secretaries and Editors was held at the headquarters of the A.M.A. in Chicago on November 17th, and 18. The officers of the A.M.A. arranged a very instructive and informative program; all discussions were interesting and particularly harmonious. The subjects discussed were: the activities of the Committee for Post-war Medical Services; the activities of the Council on medical Services and Public Relations; the E.M.I.C. Program, Medical Service Plans; Radio Broadcasting of Medical Programs, and the problems of the National Fitness Program.

The Committee for Post War Medical Services has arranged a Bureau of Information for medical men returning from the Service. It has sent out 60,000 questionnaires, and to date has received over 18,000 replies. They expect to receive at least 25,000. These questionnaires have been for the purpose of determining the wishes of the men when they return from service. Their answers are divided into three classes. 58% of those replying desire a period of one to two years of medical work; 23% desire courses of less than six months, and the remainder are not interested. This medical work is to consist of post graduate courses, refresher courses, general residences in hospitals and interneships. These returning service men will receive very valuable aid under the so called G. I. Joe Bill which was recently passed by Congress. Under the provisions of this bill any one under twenty-five years of age is considered to have had his education interrupted. However, the Veterans' Administration has been successful in having it decided that every medical officer entering medical service has had his work interrupted, and, therefore, eligible for benefits. These benefits will consist of a cash payment of $500.00 and $50.00 a month maintenance for single men and $75.00 a month, or more, for married men with dependents. The Surgeon General, and other members of the Government, are very sympathetic to the problems of the returning medical officers, and are very anxious to co-operate in every way so that every one desirous of taking these medical courses will be satisfied. This bureau of information will also obtain information about locations in all parts of the Country

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The activities of the Council on Medical Services and Public Relations was Extensively Discussed. It was pointed out that this is not a political lobby, nor a bargaining agency. Its function consists entirely of establishing friendly relations in Washington, D. C. with members of Congress, of obtaining as much information as possible about members of Congress, of their activities and standing toward the medical profession and the practice of medicine; furnishing of information about the practice of medicine to our national legislators, and of dispensing the information which they obtain to the medical profession at large. This information is furnished in bulletins sent out from the head office in Washington and all physicians are urged to read these reports. The Washington office is under the direction of Dr. Joseph Lawrence of Albany, N. Y., who has had twenty years experience in the State Legislature of N. Y., dealing with medical legislation before the N. Y. State Legislature. The Council proposes throughout the U. S. to gather information about local conditions and local medical problems. Their object is to carry out the platform of the A.M.A. The provisions of this platform are the availability of the highest type of medical care possible for every person in the Nation.

The officers of the Red Cross were desirous of obtaining an expression from the medical profession regarding the future of the Red Cross blood procurement program. These men stated that the Red Cross did not wish to intrude on the work of the civilian blood banks. It was the unanimous expression of the Conference to request the Red Cross to co-operate with all other blood donor organizations.

Medical service plans received wide spread interest among all members of the meeting. The A.M.A. decided in years gone by, when the threat of socialized medicine developed, that their answer was: voluntary pre-paid, non-profit medical services. The problems of such a program are not simple because of the needs and the variation in costs in different localities. The needs for hospital care have progressed quite satisfactorily as represented by the Blue Cross Hospital Srevice plans, and numerous other hospital insurance organiza-

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tions throughout the Country. Medical service plans are being organized in a number of States under the direct supervision of State Medical Societies, but this part of the work is proceeding much more slowly than the hospital service. The two plans which are most frequently cited as exampes, are: The Michigan Medical Service Plan, and the California Medical Service Plan. The State of Michigan has the largest enrollment. They have 700,000 subscribers to the plan. This compares with the Michigan Blue Cross which have 1,200,000 subscribers. It is interesting to point out that there are three areas in the U. S. around which medical service plans have developed. Namely: The West Coast, consisting of California, Oregon and Washington, next the States of Michigan, Ohio and Indiana, and from there Eastward to New England where plans have been organized by New Jersey, Connecticut, and Massachusetts. However during the past year plans have been put in operation in Missouri and Kansas, and are pending in various other states. The problems of medical service plans and hospital plans are still in their initial stages, and there is much educational work to be done, both among members of the medical profession and the laity and it has even been suggested that specific instructions along these lines be given during regular medical courses in medical schools of the Country. This is the answer of American medicine to the impending threat of socialized medicine.

The subject of medical broadcasting was fully discussed. The President of the State of Michigan Medical Society explained the success and effectiveness of their program. To begin with they made a special assessment of $10.00 per member for the entire State association. Their programs consisted of a series of dramatic radio skits based upon instances in the daily lives of American doctors of medicine. They engaged the services of an advertising company to carry out their program. Their conclusions were that their program was heard by 20% of the population. It was the unanimous opinion of all who discussed radio broadcasting that the medical profession owed it to themselves, and even more to the public, to bring the full truth about medical problems and the great service which the medical profession to render, to the public. The only way that this information can be brought to the public today in a convincing manner is by more extensive radio broadcasting, with the procurement of more expensive broadcasting hours, namely: evening programs, in order that more millions of Americans will hear the broadcasts.

The National Fitness Program was very interesting to every one. Col. Leonard G. Rowntree's report covering the medical examinations of the Selective Service Act, has produced widespread discussion throughout the Country and is being used as a political football. The statistics of his report show that five million Americans between the ages of 18 and 37 were unfit for military service. A national council on physical fitness has been formed and State committees have been put to work in 42 States in the Union. It is to be the work and function of this Committee to determine what constitutes physical fitness. There is a difference between healthy individuals and individuals who are physically fit. For example, a survey of 2,000 students entering a University revealed the fact that one out of three could swim across a swimming pool. One out of five could chin themselves five times. This Committee proposes to begin examinations in schools and expand their work to educate every one as to what physical fitness should consist of. It is a known fact now that students in grade schools, high schools and even in colleges, may be prefectly healthy on a whole, but as soon as they leave school and enter industry, or any of the walks of life, physical disease begins immediately to develop.

The duties of the Editors of the various State Journals were, also, discussed at length. It was pointed out that Editors should keep their readers fully informed on all economic problems facing the medical profession at large. There is much misunderstanding among the profession pertaining to the functions and activities of the various National Organizations, and, as a result very much needed co-operation from the profession is lacking. Doctors are not ignorant, they are just uninformed. National Journals are unable to present local problems, on this type of work. A spirit of harmony and promised co-operation prevailed throughout all the general discussions on the program.

FRANK J. MILLOY, M.D.,
Secretary-Editor.

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have recently increased their rates on professional liability insurance to practically double the amount previously charged.

The Standard Insurance Agency, Inc.

a pioneer in writing malpractice insurance for Arizona physicians, is pleased to announce that it can now offer the same broad, professional liability contract in THE AMERICAN CASUALTY COMPANY at the following rates:

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10,000/30,000	32.50	81.25
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The above premiums cover general practice, including surgery. Higher rates are levied to cover x-ray and radium therapy. The three year policy is recommended for the saving involved and for the protection to the insured against a raise in rates during that period.

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INC.

ED. H. BRINGHURST, President

35 W. Jefferson St. Phoenix, Arizona

Clinical Pathological Conferences

A. V. 28 year old white woman.

Previous entry: March 2, 1943.

As a child the patient had had frequent sore throats and tonsillitis. At the ag eof 6 the patient was told she had high blood pressure, the amount being unknown. At the age of 20, when undergoing an appendectomy, hypertension was again found. The patient had been pregnant three times and had had therapeutic abortions because of the hypertension. With the first there had been convulsions and vomiting of blood.

Several hours prior to the present admission htere was a severe attack of precordial pain with no radiation, being still present on entry and not subsiding for several hours more.

Physical examination: Temperature 97, pulse 100, rsepirations 30, blood pressure 220/130. The patient was a well developed and well nourished white woman in acute pain, apparently 30 years of age, sitting up in bed. ENT not remarkable. Heart revealed a loud aortic diastolic murmur. Lungs, abdomen, and extremities were normal. Reflexes normal.

Laboratory: Blood: Hb. 80%, WBC 10,200; P. 85%. Sed. rate 2 mm/hr. Urine: Sp. gr. 1.025, Sugar 0, Albumin 4 plus. 10 WBC./HPF. EKG reveale dlow T1 and inverted T2 and T3.

Courses: The pain subsided several hours after entry, and the patient felt fairly well until 3-7-43. At this time she had another attaek of severe precordial pain, beeame eomatose and syanotic, had a generalized convulsion and the blood pressure was unobtainable. This lasted a short while and the blood pressure returned to normal; the patient regained eonsciousness and the pain disappeared after a time. EKGS following this were typieal of an acute posterior infarction and she made a slow recovery and was finally discharged on May 27, 1943, the NPN being 72 mgm%.

Present Entry: July 26, 1943.

At home the patient remained at bed rest for about one month and then became semi-ambulatory for the next month.

The day of entry the patient was seized with a very severe precordial pain which radiated straight through to the back and up into the neck, which lasted a few hours after entry. Given M. S., gr. 1/6.

Physical examination: Temperature 98.4., pulse 100, respirations 24, blood pressurre 185/90. The patient is a moderately orthopneic, pale, eold, but not cyanotic white woman, writhing in bed and complaining of the above-mentioned pain. ENT negative. There were a few moist rales at both lung bases. Heart enlarged to the left with a napical systolic murmur and a loud blowing aortic diastolic murmur. Abdomen and extremities negative.

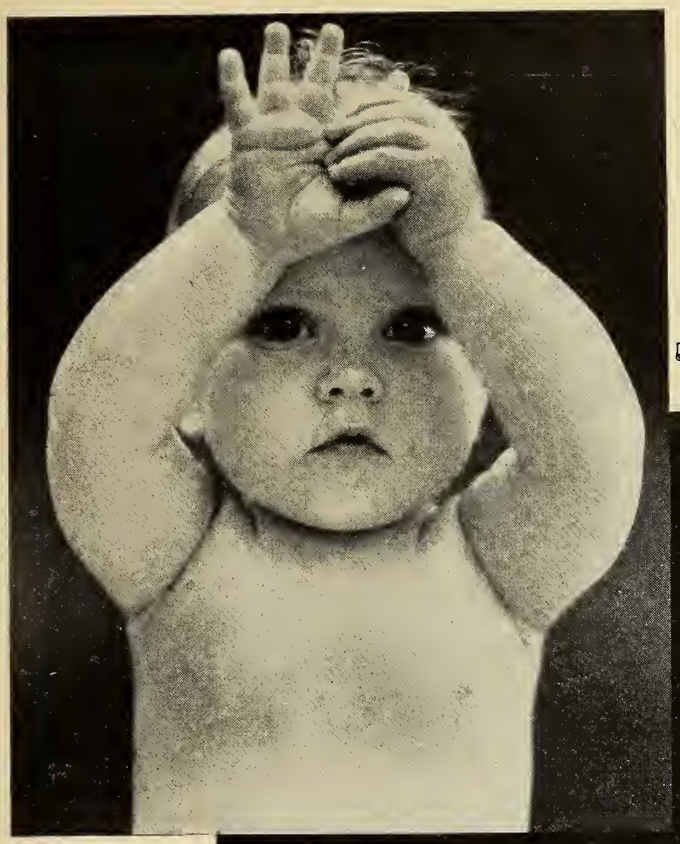
EKG revealed no change since previous tracing. Two hours after entry patient lost eonsciousness and became cyanotic. Blood pressure could not be obtained. After caffeine sodium benboate, gr. viiss, blood pressure was gotten as 80/? Five hours later patient was awake and much improved with blood pressure of 100 systolic. Patient became restless and pulse noted as poor. About fifteen hours after entry she became quiet with poor pulse and shallow respirations and died an hour later, sixteen hours after entry.

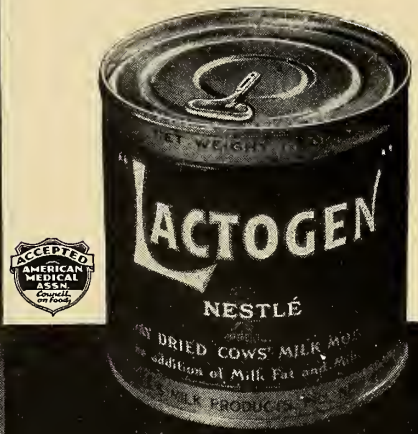
DR. WM. DOCK: High blood pressure: A patient who has hypertension at 28 probably has nephritis from infancy. There might be some congenial anomaly of the urinal tract. It is unlikely that it is due to the tumor of the adrenals. Hypertension is probably renal in origin due to chronic pyelonephritis since infancy. Sudden onset of chest pain suggests a dissecting aneurysm of the aorta. Pregnant women are likely to get dissecting aneurysms of the aorta. Dissecting aneurysms of the aorta occuring during pregnancy have been reported by the various people. I believe that this woman has had a disseeting aneurysm of the aorta. A patient with an infarct of the heart may also have hypertension. But it is most likely that this woman has an aneuruysm. Patient sitting up in bed: This seems odd. How restless was this patient? A patient with an infarct of the heart usually tends to freeze, and is very restless. Patient has heart murmur: Has this woman an aortic insufficiency? This is unlikely. Laboratory: She has a slight leukocytosis and normal sedimentation rate. Urine not remarkable. We find that she has some changes in her EKG. In that case it would seem that she should have a large left ventriele. There are some changes in the T wave. These changes that are described are non-speeific. Not enough for a diagnosis for myocardial infaretion. This is too soon after infarction to expect those changes of the deep Q waves. We still stick to a dissecting aneurysm.

Course: This stay of brief duration could have been diagnosed as a myoeardial infarction. It would depend on the man who read the EKG, but I still don't like it. Would leukoeytosis and fever follow this? They do not give any data on the white eount and sedimentation rate. It was not taken the second time. People who saw her thoght she had a myoeardial infaretion and she was kept in bed for two months. We do not believe this. There is one thing missing. It does not say all the pulses could be felt. All

(Continued on Page 352)

Presented at the Arizona State Medical Association Annual Meeting, Phoenix, April 15, 1944.





LACTOGEN

approximates women's milk in the proportion of food substances

THE cows' milk used for Lactogen is scientifically modified for infant feeding. This modification is effected by the addition of milk fat and milk sugar in definite proportions. When Lactogen is properly diluted with water it results in a formula containing the food substances —fat, carbohydrates, protein, and ash—in approximately the same proportion as they exist in women's milk.

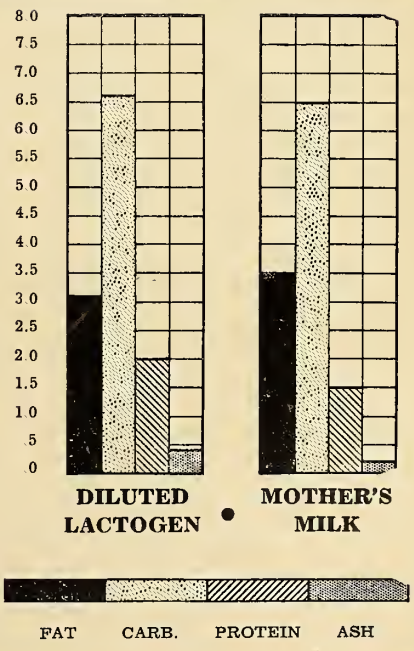
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My own belief is, as already stated, that the average well baby thrives best on artificial foods in which the relations of the fat, sugar, and protein in the mixture are similar to those in human milk."

JOHN LOVETT MORSE, *A.M., M.D.*
Clinical Pediatrics, p. 156



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Scientific Program

ANNUAL MEETING

April 27-28, 1945, Tucson, Arizona

PIONEER HOTEL — HEADQUARTERS

ROSTER OF SPEAKERS
(Baylor University College of Medicine)

George W. Salmon, M. D. Assistant Professor Pediatrics

Wilton M. Fisher, M. D. Assistant Professor Public Health

Paul A. Wheeler, M. D. Assistant Professor Pathology

Herman W. Johnson, M. D. Professor and Chairman of Department of Obstetrics

James A. Greene, M. D. Professor and Chairman of Department of Internal Medicine

Friday Evening, April 27

1. Physical Findings in Heart Disease James A. Greene, M. D.
2. Fever in Persons Returned from the Tropics Round Table Discussion Drs. Fisher, Wheeler, Johnson, Salmon, and Greene

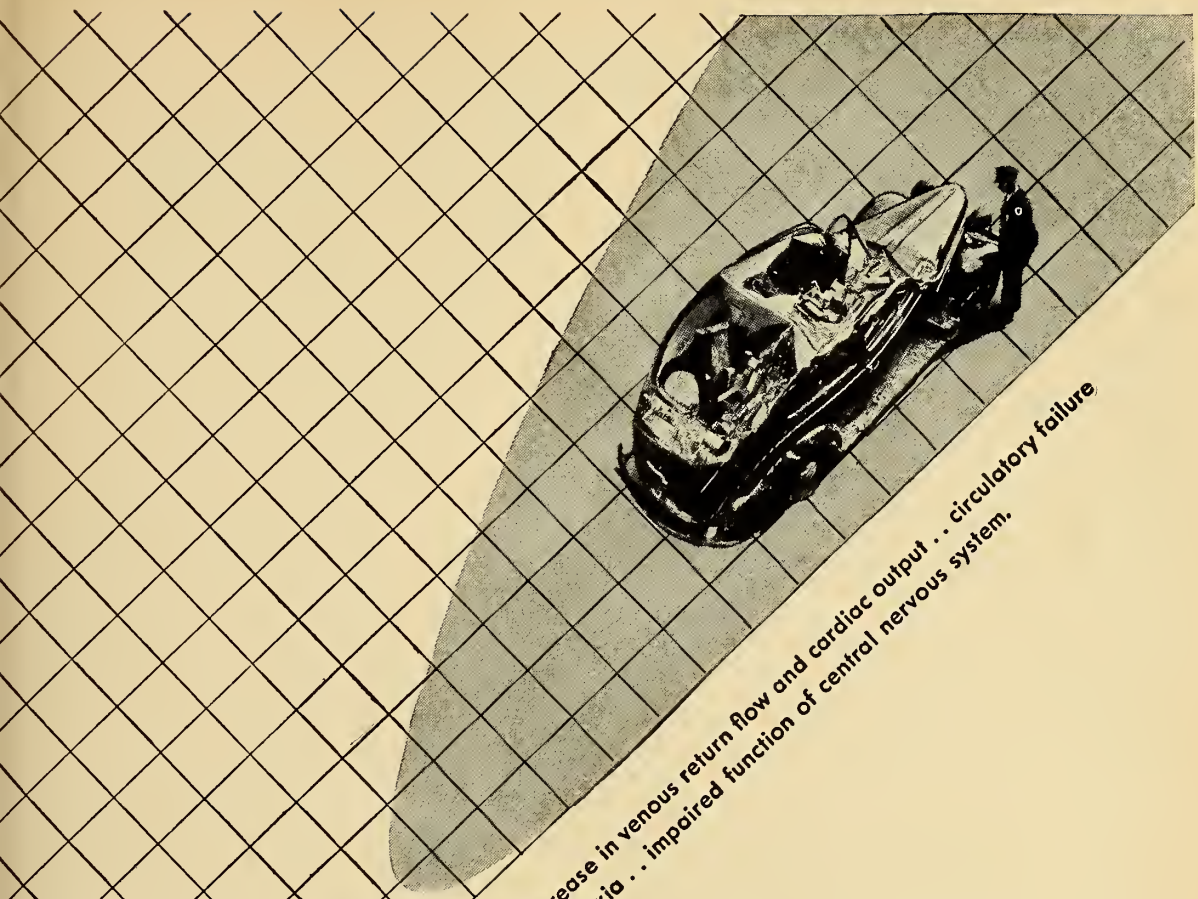
Saturday Morning, April 28

1. Tropical Diseases in this Area in the Post War Era — Wilton M. Fisher, M. D.
2. An Evaluation of Arterial Changes in Gangrene of the Extremities Paul A. Wheeler, M. D.
3. Obstetrical Herman W. Johnson, M. D.

Saturday Afternoon, April 28

1. Pediatrics George W. Salmon, M. D.
2. Clinico-pathological Conference Visiting Staff

NOTE: The complete program will appear in subsequent issues of this journal.
(Committee on Scientific Assembly)



traumatic shock

decrease in venous return flow and cardiac output . . circulatory failure . . anoxia . . impaired function of central nervous system.

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(Continued from Page 348)

pulses should be in good order. She came back again in July, with more precordial pain. However, she had no history of nausea and vomiting which is so common. This is less common with dissecting aneurysm. Incomplete rupture. Usually x-rays help with this diagnosis. Usually when the thing dissects down it ruptures through into th epericardium in a short time. Temperature is down. Blood pressure has fallen. Suggestive of myocardial infarction.

Patient is writhing in bed: This is more typical of a dissecting aneurysm. If she has had a dissecting aneurysm it has stayed aromnd the region of the arch. 1. Dissects around the subclavian. 2. Partial ruptures occur in the ascending aorta with blood getting in behind and leading up to a diastolic murmur. No EKG changes. This is questionable. Seems impossible to have the same tracings. I suspect that we would not agree with the EKG being the same. Veins did not become distended as we would expect. Perhaps she was bleeding some place else. Possible pleural cavity. Dissection of the aorta involving the ascending aorta. Was there adequate thyroid function? Perhaps her disease occurred during pregnancy where the aorta undergoes a cystic medial change and ending up with a rupture where she could bleed to death. No X-rays were taken. If she had a myocardial infarction, x-rays would not show up much. Coarctation of the aorta. Femoral and radial pulses are equal and strong. X-ray might have shown something. Extremities were negative. Was the patient also examined for peripheral vascular disease or sciatica? She had good pulsation in her legs. I cannot think of any other congenital lesion that could have caused this. My diagnosis is still ruptured aneurysm. The next guess would be pyelonephritis from infancy. NPN had only gone up to 72. Glomular nephritis might be the diagnosis.

DR. EDWARD M. BUTT: The body is that of a well developed, well nourished, white female of abont 30 years.

The pericardium is obliterated by fibrous adhesions. The visceral pericardium is thickened by recent hemorrhage from tear in aorta. The hemorrhage is one to two mm. in thickness and covers almost the entire pericardial surface of the heart. The weight of the heart is 500 grams. The ostia of the right coronary is moderately narrowed, otherwise the coronary arteries are free of atherosclerotic changes. In the posterior portion of the septum there is a fibrous scar having a diameter of about 3 cm. The aorta has an old tear 1.5 cm. above the aortic valve, which extends around the aorta in a transverse direction, giving rise to an aneurysmal dilatation measuring 3x3x8 cm. This is lined by smooth media. Through this bulge on its anterior lateral surface there is a recent rupture measuring 1 cm. across, through which the blood has passed into the adjoining tissue and subepicardial space. This mass when distended with blood probably compressed the right coronary artery, which resulted in a posterior infarction.

The kidneys are normal size. The surfaces are finely granular and congested. Surface markings are normal. Kidneys together weigh 260 grams.

Microscopical examination of the aorta revealed the presence of cystic disease of the media. Kidneys showed no more than a moderate thickening of the walls of the arterioles.

Anatomical Diagnosis

1—Idiopathic cystic medial necrosis, aorta.

2—Aneurysm, dissecting old and recent, ascending aorta with rupture and fatal hemorrhage.

3—Hypertensive disease with hypertrophy of heart.

4—Compression lesion of right coronary artery with infarction of heart, old.

5—Pericarditis, chronic, adhesive.

DR. DOCK: What was the hypertension due to? We do not know exactly what we are dealing with. Did you look at the thyroid? It is better to get a look at the thyroid in dissecting aneurysms.

DR. BUTTS: No, we did no.

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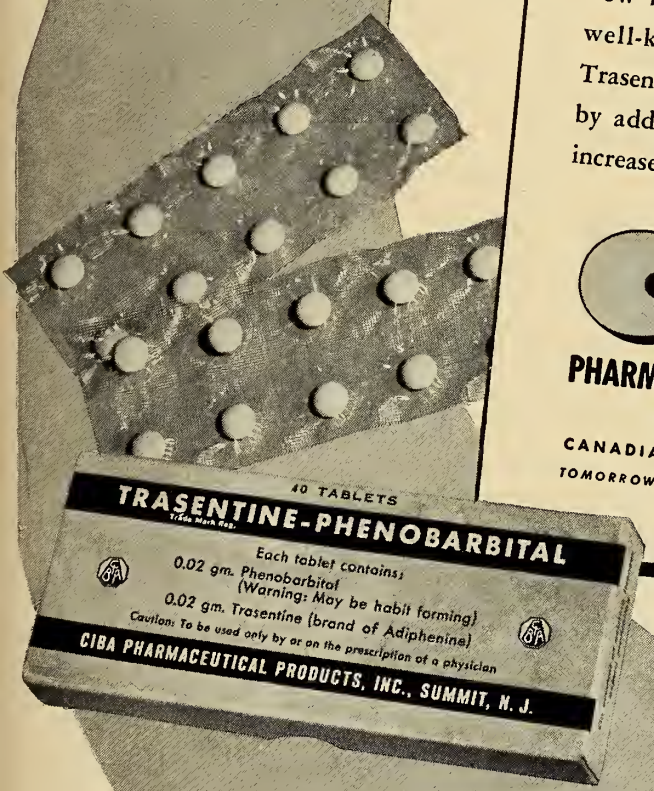
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(Mrs. T. A. Hartgraves, State Publicity Chairman)

The Maricopa Auxiliary is sponsoring a series of Educational Programs conducted by the Field Army of the Arizona Cancer Society. The first of these programs was given at the Westward Ho hotel October 17th, at which time Mrs. Emily G. Bogert, Regional Commander of the American Cancer Society, Dr. E. Payne Palmer, Educational Director of the Arizona Cancer Society, and Mrs. Thomas A. Hartgraves, State Commander of the Arizona Cancer Society, gave talks on the importance of cancer control in the State of Arizona. The guests at the luncheon were the Presidents of the leading Women's organizations, together with the program chairman of these organizations. In the evening a meeting was held at the Good Samaritan Hospital, at which time a preview of the picture "Choose to Live" and the plans for the educational program were laid before the leading Educators of the State and County. It was decided that a speakers Bureau should be formed and made available to the Clubs and Schools in County.

The first business meeting of the Women's Auxiliary of the Maricopa County Medical Society was held in the home of Dr. and Mrs. E. Payne Palmer. The program consisted of "Choose to Live", a talk by Dr. Maurice Rosenthal, Chairman of the State Speakers Bureau of the Arizona Cancer Society, "Cancer as the Pathologit Sees It." Dr. E. Payne Palmer, Educational Director of the Arizona Cancer Society, spoke on "The Importance of Cancer Control in the State of Arizona," and Mrs. Thomas A. Hartgraves talked about the different fields of the project and how the Auxiliary could assist this project in Maricopa County.

Our War Service project is being carried out through the members, acting as hostesses of the day, for the service men's snack bar, and furnishing food.

At the annual Fall luncheon, Cavett Robert



"THE WORLD IS FLAT!"
said many long ago!



"CIGARETTES ARE ALL ALIKE!"
say many today!

"*One cigarette less irritating than another? Nonsense . . . they're all the same!*" You have probably heard that as often as Columbus heard the world was flat!

BUT there *is* a difference in cigarettes. PHILIP MORRIS *are* measurably less irritating to the nose and throat. That is no longer a matter of speculation. It has been *proved.* Conclusively. Both in the clinic and the laboratory. And to the complete satisfaction of respected medical authorities, whose studies have been published in the foremost medical journals.*

May we urge you to try PHILIP MORRIS Cigarettes yourself? We know of no better way to convince you than actually to *see* the results.

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*Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154. Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60. Proc. Soc. Exp. Biol. and Med., 1934, 32, 241. N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.

TO THE PHYSICIAN WHO SMOKES A PIPE: We suggest an unusually fine new blend—Country Doctor Pipe Mixture. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

Effective Convenient Economical

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is economical because stock solutions may be dispensed quickly and at low cost. Stock solutions keep indefinitely.

Mercurochrome is antiseptic and relatively non-irritating and non-toxic in wounds.

Complete literature will be furnished on request.



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talked on Community War Chest. Robert Becker and Joseph Refsnes talked on the Sixth War Loan Drive.

The Auxiliary is also active in Red Cross work and has recently donated $15 to the Camp and Hospital Committee of the Maricopa Chapter of the American Red Cross. Gifts for this camp and hospital service will also be wrapped at our pre-Christmas meeting.

Respectfully submitted,
MRS. MATTHEW COHEN,
Chairman of Publicity, Maricopa County.

PUBLICITY REPORT OF THE WOMEN'S AUXILIARY TO THE PIMA COUNTY MEDICAL SOCIETY

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2648 E. 7th Street, Tucson, Arizona
First Vice-President Mrs. Geo. L. Dixon
2716 E. 4th Street, Tucson, Arizona
President-Elect Mrs. C. S. Linton
525 N. Wilson, Tucson, Arizona
Recording Secretary Mrs. Wm. R. Lyon
316 E. Speedway, Tucson, Arizona
Corresponding Secretary Mrs. Lewis H. Howard
1730 E. 8th Street, Tucson, Arizona
Treasurer Mrs. John L. Donahue
Valley Bank, Tucson, Arizona

COMMITTEE CHAIRMEN

Cancer Project Mrs. Dan Mahoney
1916 E. 4th Street, Tucson, Arizona
Legislation Mrs. V. G. Precson
1317 N. Stone, Tucson, Arizona
Public Relations Mrs. R. K. Smith
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Publicity Mrs. E. J. Gotthelf
327 E. Speedway, Tucson, Arizona
Bulletin Mrs. B. B. Edwards
928 N. 2nd Ave., Tucson, Arizona
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1916 E. 5th, Tucson, Arizona
War Service Mrs. S. H. Watson
2 Paseo Redondo, Tucson, Arizona
Philanthropy Mrs. Wm. D. Carrell
2131 E. 5th, Tucson, Arizona

Our first meeting was held October 10th at the home of Dr. and Mrs. Luther Davis. Dr. Grace Zonbough delivered an address on Early American Glass. The Preventorium will again be a project we are greatly interested in. At this meeting it was decided the Pima County Auxiliary should sponsor a luncheon in the El Patio at the Temple of Music at which time Mrs. Eimily G. Bogert, Regional Commander of the American Cancer Society, Dr. Ludwig Lindberg, Chairman of the Cancer project of the Arizona State Medical Association, addressed the ladies. Mrs. Thomas A. Hartgraves, State Commander of the Arizona Cancer Society, and Mrs. Hervey Faris talked on Cancer Control in the State of Arizona before the Presidents and Chairman of the program committees of the leading Civic organizations of Tucson.

Mrs. Hervey Faris accepted the appointment as City Commander of Tucson, Arizona. She wil inaugurate an educational program in the High Schools and University of Arizona.

Respectfully submitted,
MRS. E. J. GOTTHELF,
Chairman of Publicity of
Pima County Auxiliary
Medical Society.

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The coil spring in the rim of the "RAMSES"* Diaphragm is flexible in all planes, permitting adjustment to muscular action.

The spring used has sufficient tension to insure close contact with the vaginal walls during use.

The spring is covered with soft rubber tubing which serves to protect the patient against undue spring pressure. Also provides a wide unindented area of contact.



Cut away section of "RAMSES" Diaphragm Rim. Note cushion of rubber tubing which protects against spring pressure; provides smooth unindented area of contact with vaginal walls.

End view of "RAMSES" Diaphragm Rim showing coil spring imbedded in rubber.

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

"RAMSES" Flexible Cushioned Diaphragms are supplied in sizes ranging from 50 to 95 millimeters. They are available through any recognized pharmacy. Only the "RAMSES" Diaphragm has the patented flexible cushioned rim.

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gynecological division

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A MARK OF Ramses DEPENDABILITY

PUBLICITY REPORT OF THE WOMEN'S AUXILIARY OF YAVAPAI COUNTY

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225 Yavapai Drive, Prescott, Arizona
First Vice-President.....Mrs. G. C. Daniels
Whipple, Arizona
Corresponding Secretary.....Mrs. E. A. Born
310 S. Mt. Vernon, Prescott, Arizona
COMMITTEE CHAIRMEN
Cancer Project.....Mrs. J. H. Allen
829 Crest Ave., Prescott, Arizona
Hygeia.....Mrs. C. B. Smithson
Whipple, Arizona
War Service.....Mrs. Geo. Bassett
346 S. Mt. Vernon, Prescott, Arizona

The main objective in the Yavapai Auxiliary this year is to promote the cancer project through the schools, women's clubs and Scientific Exhibits. Mrs. Ernest A. Born, Northern District Commander, is making arrangements for sesientific material to be placed in all the northern counties in the high schools and Teachers' College. Mrs. James H. Allen, State Adjutant of the Arizona Society, recently addressed the northern district convention of the American Federation of Women's Clubs, at which time she talked on the necessity of cancer control in the State of Arizona, and the part which the Womens' Clubs could conduct most efficiently.

Respectfully submitted,
MRS. H. A. HOUGH,
President of the Women's Auxiliary of the Yavapai County Medical Society.

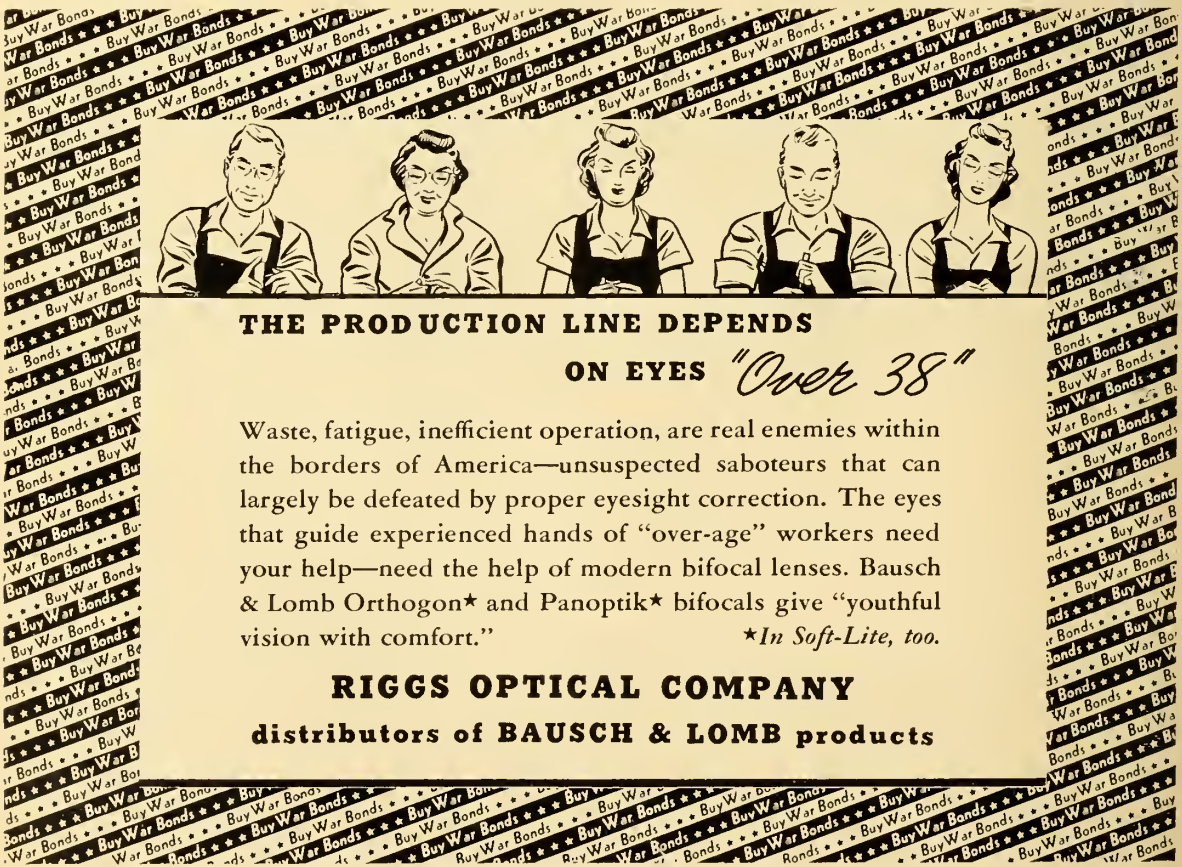
Book Reviews

THE ROMANCE OF MEDICINE. The story of the evolution of Medicine from occult practices and primitive times by Benjamin Lee Gordon, M.D., F. A. Davis Co. 1944. $5.00.

It has often happened that physicians have indulged in hobbies or collateral activities in which they have excelled to an equal degree as in their profession, or have excelled in them far more than they have in their profession, witness in the writing field such men as Weir Mitchell, Croyn and Schnitzler. This book, too, is the result of a hobby, the hobby of a prominent ophthalmologist folklore, as applied to medicine.

This remarkable, closely packed book of nearly 600 pages is a veritable history of culture, of human developmen. It is also a probing, searching book which, under the guise of recounting the incessant search for the vital principle, the secret of the human automaton and the location of vital energy reveals the author's own deep preoccupation with this subject, notably in the final chapters of his book. There he gives a resume of the ideas on the destiny of the vital principe, the Hebrew and Christian conception of the After Life and an epitome of the modern philosophers' ideas of the soul, of immortality, of the divine spark in man in the light of the theory of evolution and the latest discoveries of science.

The medical folkloristic portion of the book is bewilderingly vast and covres a tremendous range, testifying to the author's absorbing interest in his subject, to his exploration of all available sources in literature and archeology, esp. the Bible and



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the Talmud and post-Talmudic writing in which he is thoroughly at home.

Through the medium of a fluid style and fine presentation the author succeeds in conveying to us a conception of the primitive ideas regarding the human body and its functions, its diseases and the superstitions connected with them. Interesting is the author's parallel between our bacteriological concept of disease and primitive demonology.

In this history of primitive medicine and its evolution into modern times, we get an idea of the interweaving of therapy with magic, scapegoats, mysticism, symbolism, "signatures", the use of biologic products in therapy, astrology, hydrotherapy, spiritual therapy, psychotherapy and ancient surgery.

We don't hesitate to recommend this book as "must" reading for those physicians and of the laity who wish to become acquainted with the evolution of medicine from its earliest beginnings. The book is well illustrated, many of its illustrations being culled from the beautiful, highly imaginative, daring, yet on the whole, probably true, photographs of Lejaren Hillier as reproduced by the firm of Davis and Geck.

However, there are annoying misprints and errors in this book that we hope will be eliminated in its subsequent editions. Many Latin and Greek names are hopelessly misspelled. The date of Ecclesiastics (Ben Sirach) is given as 200-300 A. D., whereas the date is the same B. C. Why should the titles of Greek works be given in Latin, in default of Greek, when plain English would be preferable by far?

Otherwise this is an excellent book and deserves a place in very doctor's library.

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Volume 2 *January, 1945* *Number 1*

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1. Tracy Putnam: Convulsive Seizures, p. 4, J.B. Lippincott Co., 1943.

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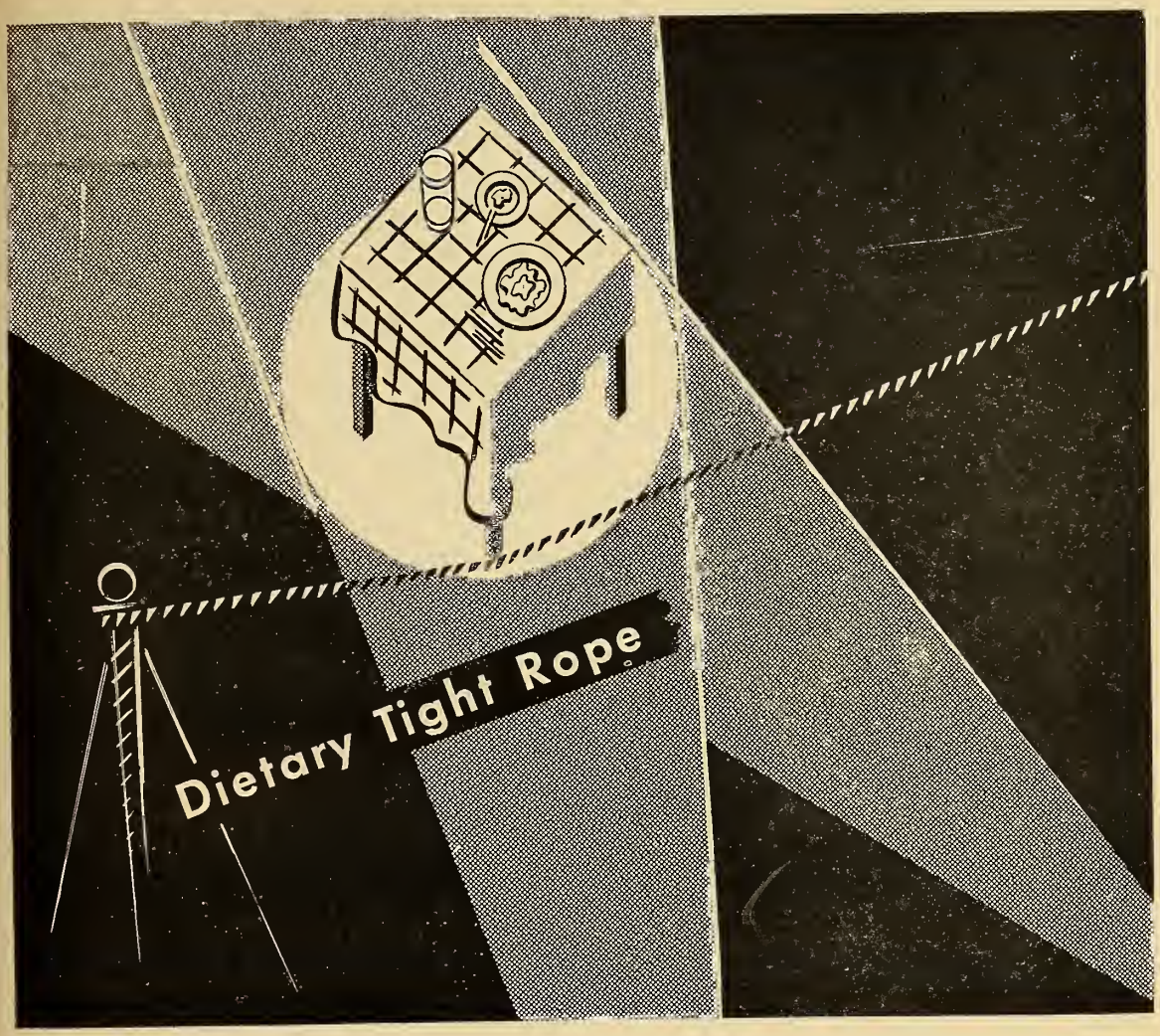
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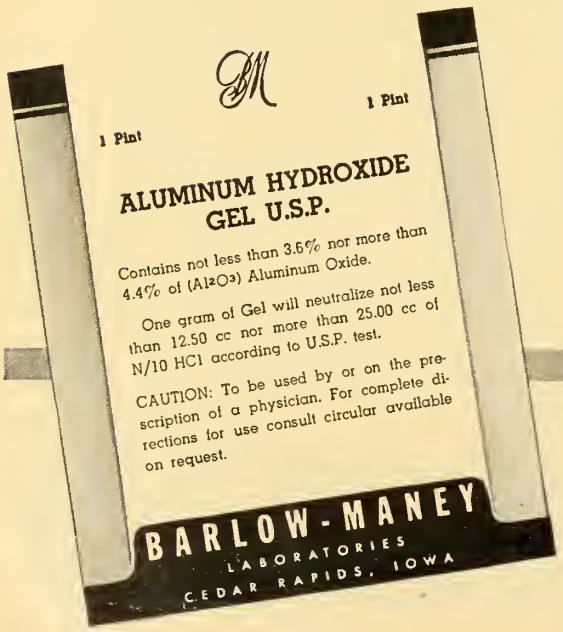
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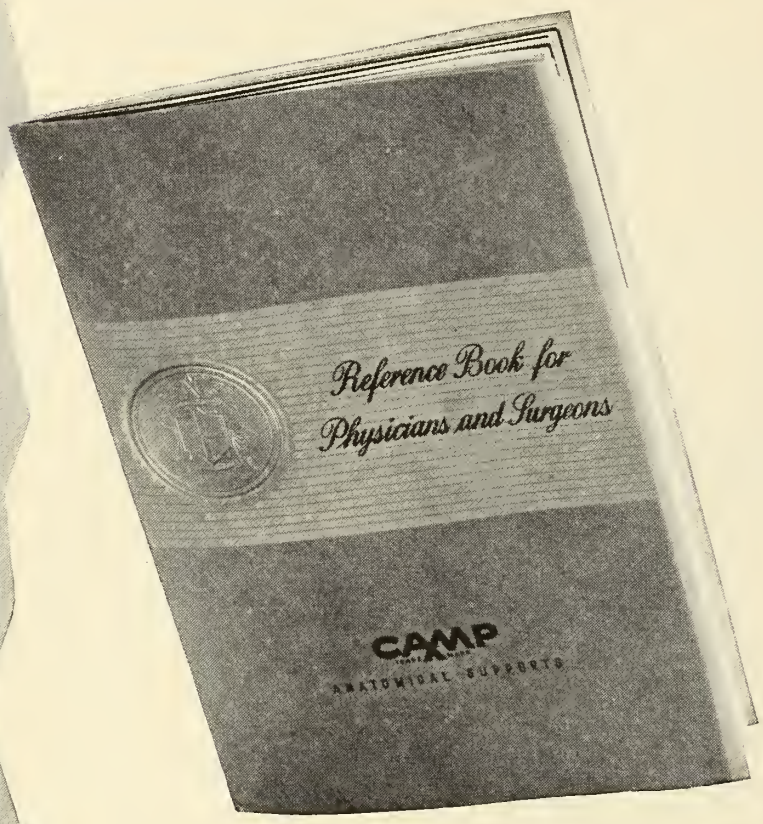
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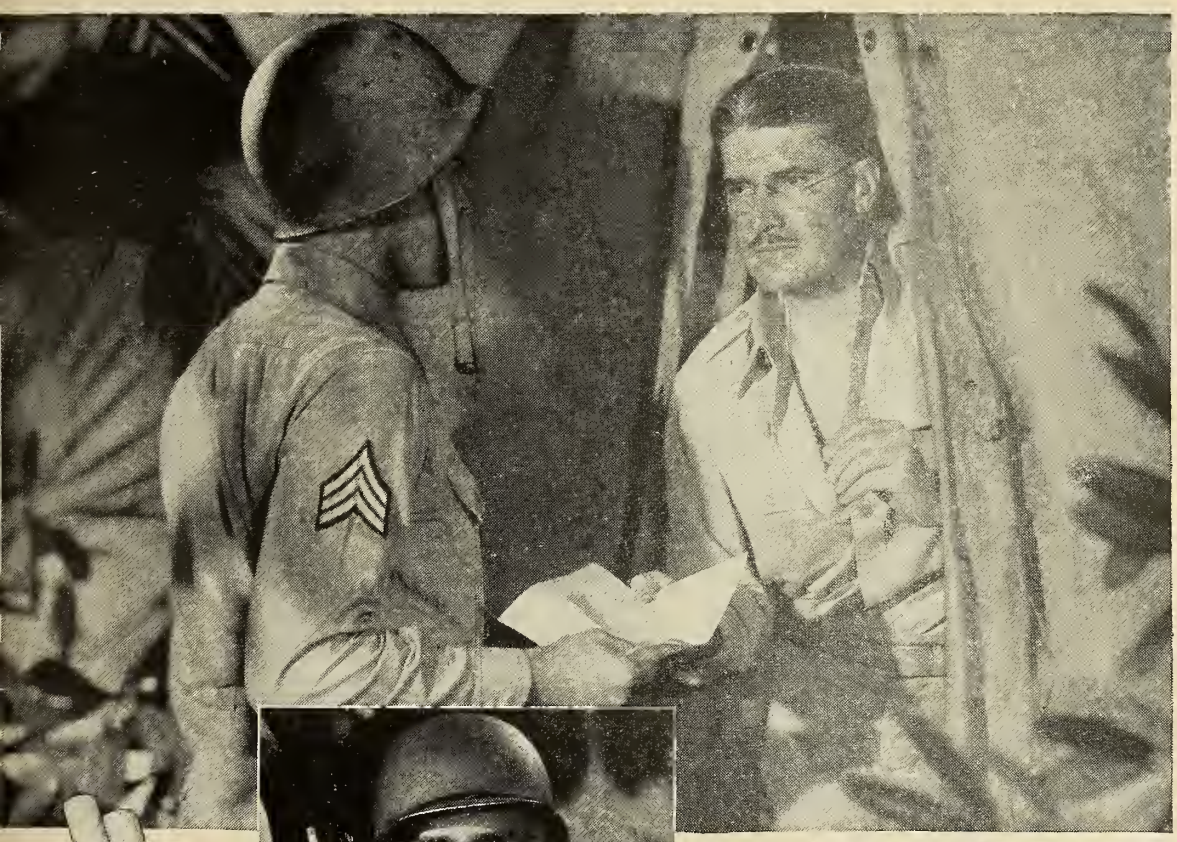
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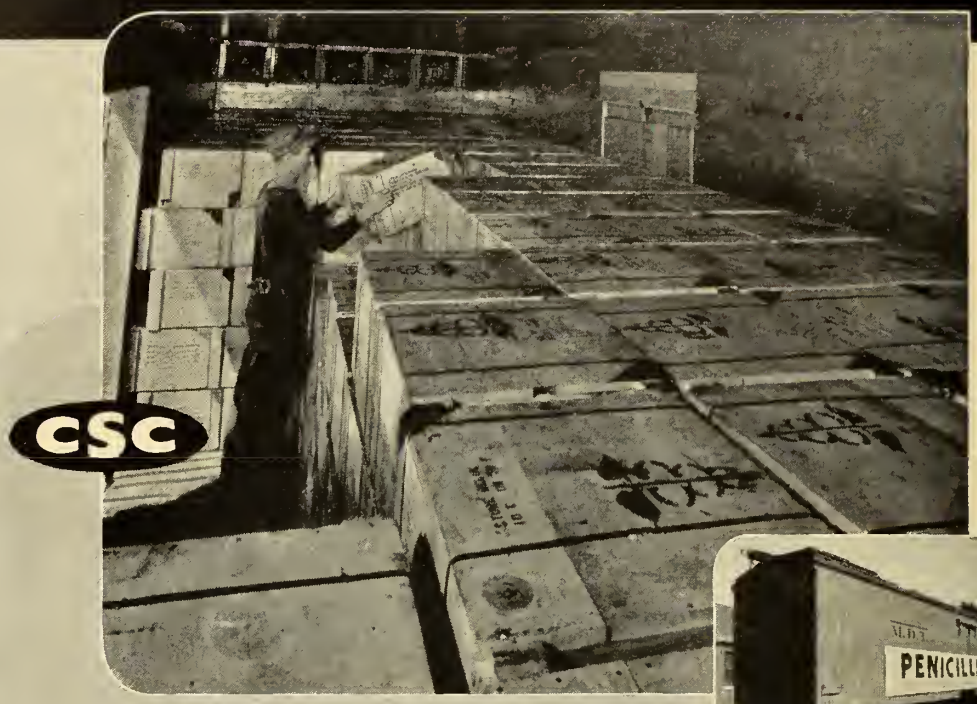


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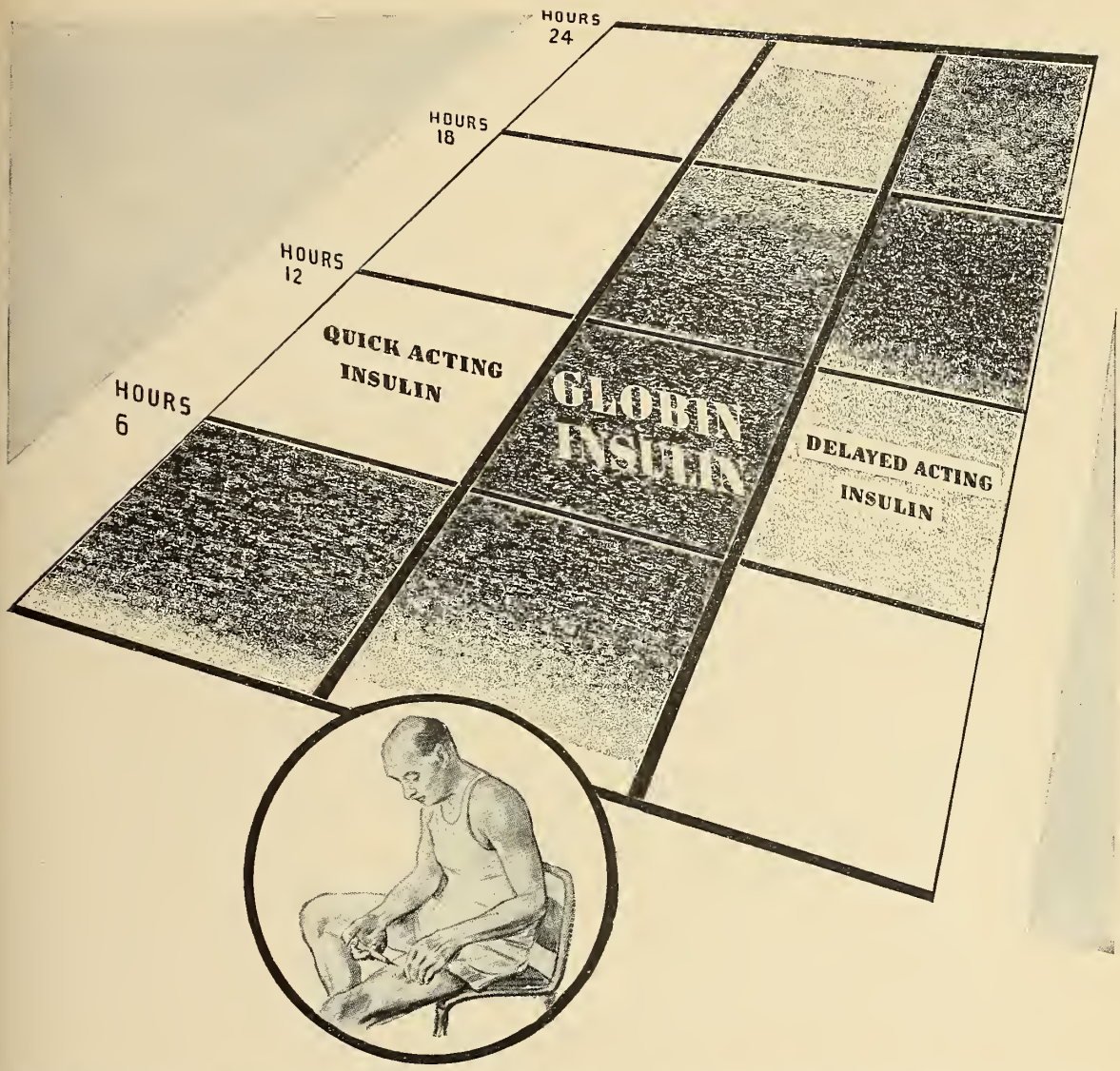
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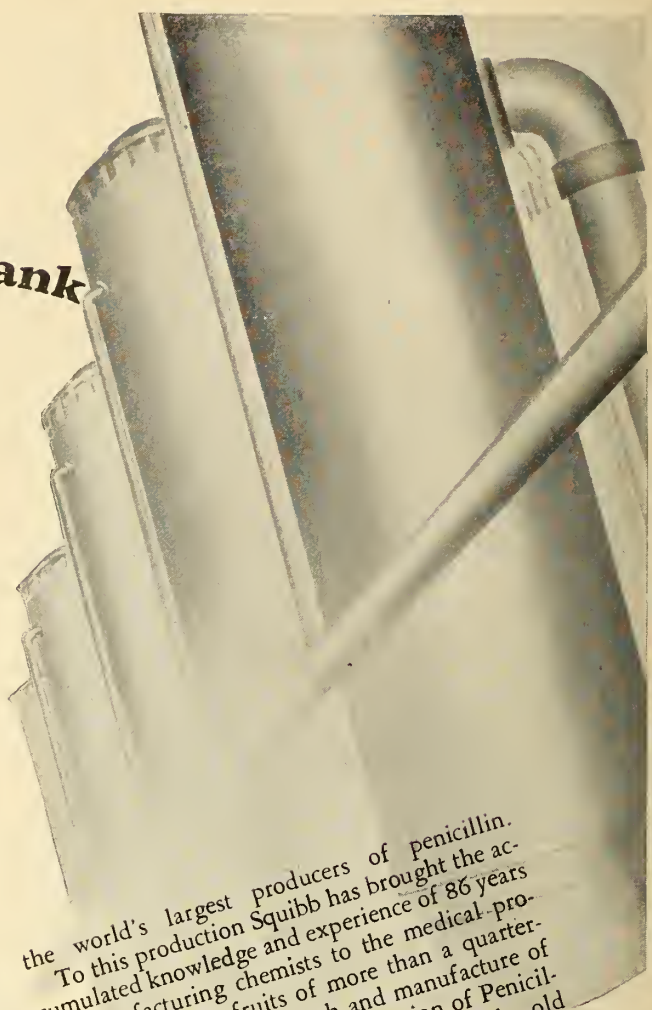
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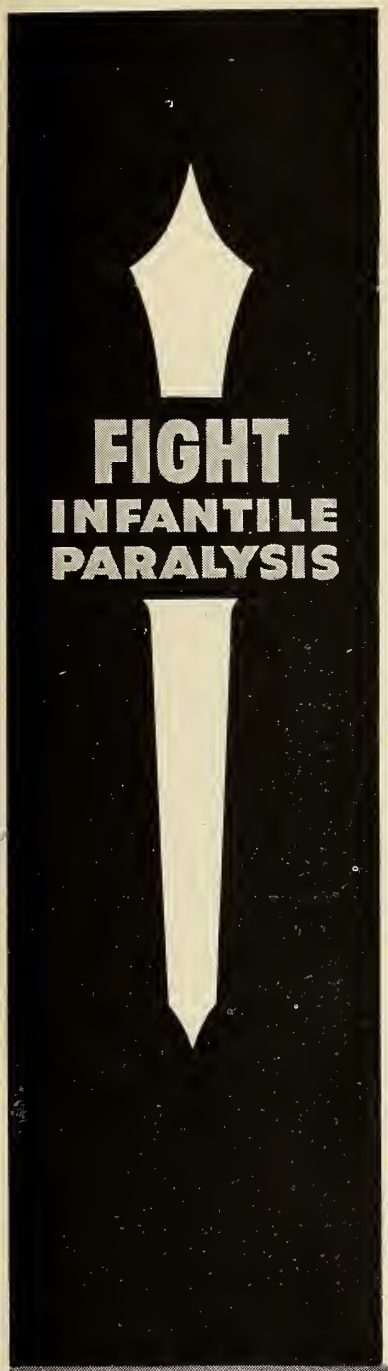
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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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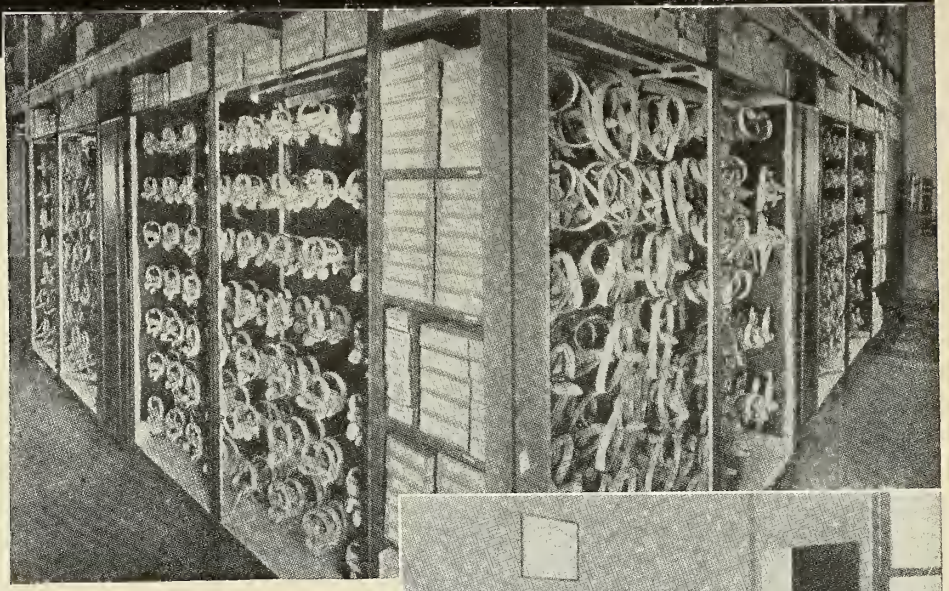
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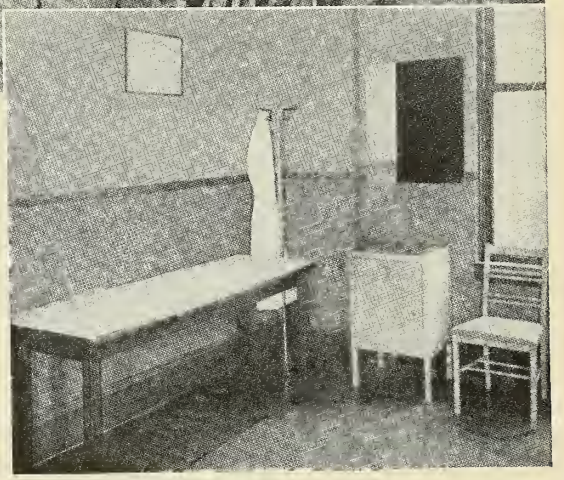
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SILICOSIS

DR. FRED G. HOLMES
Phoenix, Arizona

THE chief cause of the disability in silicosis is the dyspnea which in uncomplicated cases may begin in the second stage and become worse as the disease progresses. The cough, sometimes profusely productive but usually dry, which accompanies the dyspnea. is a lesser cause of disability. In very late stages, the right ventricular hypertrophy (cor pulmonale) or right heart failure with its dependent edema may cause some additional disability. Usually, however, the worker is quite highly disabled before the heart failure begins. At any stage, the toxemia and symptoms of tuberculosis may cause rapid and complete disability.

The evaluation of the disability of a silicotic is often very difficult. It is much more difficult if one add to the inherent uncertainties the possibility of lack of sincere cooperation, due to the attempt to obtain compensation. In most tests of pulmonary function, the complete cooperation and utmost effort on the part of the worker are necessary for the proper determination of disability.

Rapidly developing (acute) silicosis, coming on within a few years of a relatively brief exposure to massive amounts of very fine, almost pure silica dust, gives rise to great disability. It seems that such cases should be classified as one hundred percent disabled, since they get progressively worse and usually die within a very few years.

Cases of tuberculosis should also be classified as totally disabled, both for the protection of their fellow workers and to afford them the best chance of recovery. While the outlook in tuberculosilicosis is not favorable at best, the early cases can perhaps be cured, so treatment should be instituted as soon as the disease is discovered. It would seem that only in acute silicosis and tuberculosilicosis is disability clearly manifest.

In simpe chronic silicosis great difficulty arises in the evaluation of disability. Most of these cases in the earlier stages appear healthy and complain at most of only a slight shortness of breath and a little cough. It is probable that there is little or no disability in simple silicosis until the disease is quite far advanced; in fact, many authorities believe that even massive simple silicosis never gives rise to disability.

When a worker claims disability due to silicosis, however, the burden of proof that disability is not present rests on the employer or the insurer. A vast amount of work has been done and a great many tests devised in an attempt to find some means of dispassionately determining the extent of pulmonary incapacity. So far, the search has been unsuccessful, all tests requiring the cooperation of the worker.

A complete study of the worker is necessary. This study should include a complete analysis of all the phases of the respiratory function. The heart must be studied since diseases of the heart can cause disease of the lung or pulmonary dysfunction. The blood requires scrutiny since anemia or acidosis or other diseases affecting them can cause inadequate ventilation. Lastly, the nervous system must be checked since inadequate neural control of the musculature can in turn cause inadequate ventilation. When these factors have been eliminated or their part in the disability somewhat determined, the part played by the lungs may be evaluated.

A thorough examination of the chest including x-ray, is of course, a part of every method for the determination of disability.

Careful evaluation should include unobtrusive observation of the worker under all possible conditions: at work, climbing stairs, walking, etc. A decreased output of work on a piecework basis is very suggestive of disability.

It is recommended that the reader consult the original article by W. S. McCann et al for readier understanding of some of the following recommendations appearing in that article.

The methods for evaluation may be divided into three groups: 1) Capacity measurements, 2) exercise tests, and 3) oxygen saturations tests.

Special Committee on Silicosis.

1) The pulmonary capacity and its subdivisions give some evidence of the alterations in structure and function in the lungs. A decrease in total and in vital capacity of the lungs with an increase in residual air is usual in advanced silicosis. When the ratio of residual air to total capacity exceeds 40% it is definitely abnormal.

2) The best exercise test is, of course, the work that the worker is used to, since disability should be considered the inability to carry on normal work. Since this is usually difficult or impossible to do, it is necessary to use other tests. Simple tests such as running up and down stairs, running in place, etc., may give some indication of gross dyspnea. A better method is that of measuring the total ventilation during five minutes of exercise at the rate of 300 kgm. per minute and three minutes of subsequent rest. When this is done, the ratio of total ventilation to vital capacity is of great functional significance. The value of this ratio in normal men varies from 20-48 working at 300 kgm. Values above this are abnormal. Dyspnea is experienced when the value exceeds 55.

The estimation of pulmonary reserve at definite rates of work gives an excellent index of functional ability. Normal men have a pulmonary reserve of 55-73% when working at 300 kgm. per minute, when they are using 27-45% of their maximal ventilatory capacity. Dyspnea is experienced when 50-60 of the% of the maximal ventilatory capacity is used.

3) There is a failure on the part of silicotics to attain a degree of oxygen saturation of the blood commensurate with the alveolar oxygen tension. This failure is accentuated by the breathing of low-oxygen mixtures; e.g., 17% oxygen rather than the normal 20% oxygen mixture of the air. This method has not yet been correlated with other methods of estimating disability.

It seems evident that no one method is sufficient for a satisfactory evaluation and ability.

COMPLICATIONS

Tuberculosis: The chief complication of silicosis is tuberculosis; estimates of its incidence running as high as 75%. The death rate from tuberculosilicosis in certain industries is as high as ten times that in the general population. Whether the infection takes place before or after the pulmonary fibrosis of silicosis occurs is still a debated point, but most authorities believe that tuberculosilicosis usually arises from the reactivation of a previously quiescent infection. For this reason, no known cases of tuberculosis, whether "healed" or open, should be employed where there is dust exposure. All silicotics should be protected also against contact with known cases of tuberculosis.

Most cases of tuberculosilicosis are in the older group of workers, the highest falling in the forty to fifty age group. Negroes are especially susceptible.

Pneumonia and other Acute Infections: Silicotics seem to be more susceptible to acute respiratory infections than are normal persons. They have more pneumonia, more 'colds', and more lung abscesses than is normal. These complications do not seem to be especially hard to treat although there is a tendency toward permanent consolidation in cases of lobar pneumonia. Lung abscesses arising in the partially devascularized fibrous tissue, are probably more common than generally realized.

Spontaneous Pneumothorax: Silicosis is one of the most common causes of spontaneous pneumothorax. The emphysema, the formation of emphsematous blebs and the almost constant cough lead easily to this condition. This tendency is partially compensated for by the obliteraitive (non-infectious) commonly seen.

Cancer: Whether the irritative influence of silica dust will cause bronchial carcinoma is debatable. Extensive statistical studies seem to indicate, however, that the incidence is no higher in silicotics than in the general population. Since the chief result of silica inhalation is a connective tissue proliferation, the formation of connective tissue tumors should result if silica is carcinogenic, but such tumors have not been reported.

Cor Pulmonale: Right ventricular hypertrophy or failure is seen in about half of the far advanced cases of silicosis. It is the most common cause of death in those cases which do not develop tuberculosis. The onset of heart failure is usually a terminal event. Since most patients who develop this complication are in the age group in which vascular and cardiac changes take place in the normal individual,

the part played by the silicosis in this complication is somewhat doubted, but the fibrous obliteration of the pulmonary capillary bed could easily result in right heart failure.

Bronchitis and Bronchiectasis: Bronchitis is a very frequent and chronic complication of silicosis, due probably to the irritative effects of the larger particles of silica. It usually clears up on the cessation of exposure. Bronchiectasis is not too uncommon a complication.

TREATMENT

There is no known treatment which will remove fibrosis once developed in the lungs. For this reason, there is no specific treatment for simple silicosis. Removal from exposure to the dusts is advisable in any case in which the silicosis is progressing rapidly; i.e., in which fibrosis has occurred after only a few years of exposure. It is doubtful whether the removal from exposure will stop further progression of the fibrosis since nodules present will continue to enlarge but there will be no new nodules. In those cases in which exposure has been long continued and the disease is still in its early stages, removal from exposure will not help the worker and may cause serious social and economic upheavals. Bed rest may cause some relief from symptoms. The remainder of the treatment must be purely symptomatic.

Tuberculosilicosis is much more difficult to treat than is tuberculosis unassociated with silicosis. The patients respond quite poorly to any kind of treatment. Even very early cases are very chronic and long continued treatment is essential. Collapse therapy may prolong the life of the individual but it also may shorten it appreciably, probably because of the already greatly reduced pulmonary reserve.

The treatment of the other complications differs little from that which would be used for cases without silicosis. All treatment may be less effective because of the lowered resistance of the silicotic.

15 E. Monroe.

THE Rh FACTOR; PRACTICAL ASPECTS

By R. J. JENNETT, M. D.
Phoenix, Arizona

FEW recent medical problems have prompted as much research and as many papers as the problem of the Rh factor. The confusion exists, not because it is such a complicated subject, but because we allow ourselves to be frightened by such terms as "isohemoagglutination", "agglutinogen", "isoimmunization" and so forth. The purpose of this paper is not to add anything new concerning the knowledge of the factor, but is an attempt to summarize as clearly and concisely as possible the known facts concerning it.

A clear understanding of the main blood groups is necessary before the Rh factor can be intelligently discussed and so a brief review is in order. According to the work done by Landsteiner and as proved by countless expreferences with blood transfusions, all human blood can be divided into four main groups, depending on the presence or absence of two agglutinogens, or, as they might better be called, factors. These factors, or agglutinogens, are located in the red blood cells and have been named "A" and "B". The blood groups are named according to the factors contained in the red blood cells. Blood with cells containing the "A" factor are termed "Group A", and those containing the "B" factor "Group B". Those which contain both factors are called "Group AB", and those which contain neither, by far the most frequent, are termed "O", or lacking agglutinogens. Now there also exists—present in the serum, agglutinins or anti-bodies, or anti-"A" agglutinins or anti-"B" agglutinins which are capable of agglutinating the blood cells containing the corresponding factor. Now it is obvious that blood of any given individual can not contain "A" factor in its cells and anti-"A" agglutinins in his serum. Therefore it was postulated and proven beyond doubt that "A" blood contains anti-"B" agglutinins and conversely "B" blood contains anti-"A" agglutinins. It was also shown as would be expected that "AB" blood contained neither of the agglutinins. Lastly of all "O" blood, blood

Presented before Staff of St. Monica's Hospital, October, 1944.

containing neither "A" or "B" factors, contains both anti "A" and anti-"B" agglutinins. It is important in later understanding of the Rh factor to note that the anti-"A" and anti-"B" agglutinins occur naturally and spontaneously and constantly. The discovery of these facts has made possible the wide spread use of blood transfusion.

Following the epic work of accurately classifying the various blood groups according to the factors contained in the blood cells, it became obvious that in addition to these two major factors which determined the four major blood groups, there were additional factors of much less importance but which still must be reckoned with. Two of these more minor factors are named "M" and "N" and occurred at random in all the four major groups. These proved to be of very little practical importance. Landsteiner[1] and Wiener in further work discovered another factor which has proved very practical. This factor, or agglutinogen, they named the Rh factor. It was discovered when the workers noted that a serum developed to agglutinate the red cells of Rhesus Monkeys, also agglutinated the red cells of approximately 85% of human blood samples. Since this demonstrated a factor in human blood that was identical with that found in the blood of all Rhesus Monkeys, it was named Rh factor instead of P, D or Q, or any other letter that might have been selected. As stated this factor or agglutinogen occurs in about 85% of the white population of the United States and these individuals for discussion's sake are termed Rh positive. The remaining 15% whose red blood cells do not contain this factor are termed Rh negatives. The Rh factor is found at random in blood cells of all the major groups. The Rh factor is found at random in blood cells of all the four major groups. The Rh factor has two characteristics from which it derives its main significance and importance. The first of these is that anti-Rh agglutinins, or anti-bodies, never occur spontaneously in Rh negative blood. This is in sharp contrast to the major "A" and "B" agglutinogens for which natural agglutinins exist. A second characteristic, and stemming from the first, is that although natural anti-Rh agglutinins do not exist, the Rh factor is a very potent anti-gen and when introduced into the system of the individual not possessing it, a strong immunization action is set up and high anti-Rh titers are developed. If blood containing the Rh factor is again introduced into the same subject as occurs in repeated blood transfusions, an interesting train of events will occur, as will be discussed later. It is also important in understanding the role of Rh factor in hemolytic disease of the newborn to note that it is transmitted to the offspring as a Mandelian Dominant characteristic.

Before discussing the role of the Rh factor in blood transfusion, allow me to digress and say a few words about transfusion reaction in general. The first type is the all too familiar pyrogenic reaction with which we have all had ample experience. This is in reality not a true blood transfusion reaction, since it is done to a contaminant usually present in the apparatus and can occur with the administration of any parenteral fluid. Except for a severe chill, subsequent fever and a few anxious moments on the part of the physician, no real damage occurs. The same can not be said of true transfusion reactions. When incompatible blood cells are introduced into the blood stream, the antibodies in the recipient's serum produce two actions on the foreign cells. The First is agglutination. Because this process can be so easily demonstrated in the laboratory, it is the basis of blood typing and cross matching methods. However, the Second action, that of hemolysis is even more important and is responsible for the complications which follow a true reaction. In severe cases the blockage of the kidney tubal with acid hematin may be fatal. In less severe cases it is followed by a demonstrable hemoglobinuria.

The role of the Rh factor in blood transfusion reactions can now be summarized. When an Rh negative individual is repeatedly transfused with Rh positive blood, the first transfusion will produce no trouble since the anti-Rh agglutinin does not exist naturally. However the Rh factor in the transfused red blood cells will set up the process of isoimmunization and anti-Rh agglutinin will be produced and be present in the recipient's serum. If enough time is allowed to elapse for the titer to attain a sufficiently high level, and cells containing the Rh factor are again introduced by using an Rh positive individual as the donor,

a transfusion reaction of varying severity will occur. If enough of the blood enters the circulation, it may be fatal even though the blood be of the same major group and were demonstrated to be compatible in the standard cross match test. The studies of this action of the Rh factor were done mainly by Wiener[2] and illustrated the cause for the majority of the intra-group transfusion reactions occurring in patients receiving repeated blood transfusions. It may be asked here why the incompatibility due to the Rh factor was not shown in the standard cross match as would be expected. The reason is that agglutination due to anti-Rh agglutinins ordinarily does not take place at room temperature, the conditions under which the ordinary cross match is done. It can best be demonstrated at body temperature or approximately 37.5 degrees centigrade. In addition to this, it usually requires an agglutination test carried out in test tubes along with centrifuging of the specimen.

Following the explanation for the reason of the majority of intra-group transfusion reactions following repeated transfusions, there remains a second class of intra-group transfusion reactions which occurred following first transfusion and occurred mainly in pregnant women or soon after delivery or abortion. Further work chiefly by Levine[3] gave rise to a very logical explanation and also offered a workable theory to the etiology of the majority of cases of erythroblastosis foetalis. In the making of an Rh positive husband and a Rh negative wife, the Rh factor being dominant, the foetus is also Rh positive. It was postulated that the Rh factor being dominant, the foetus is also Rh positive. It was postulated that the Rh antigenic substance from the red blood cells of the foetus was transferred through the placenta to the mother's circulation and there set up the same isoimmunization process as occurred in the transfusion of the Rh positive blood to an Rh negative individual. The mother then had the Rh agglutinins in her serum. If she then receives a transfusion from an Rh positive donor, a typical transfusion reaction may take place. Experimental evidence bears out this theory.

Following the demonstration of the isoimmunization of the mother from substances passing from the foetus to the mother, it was evident that the same process could take place in reverse, namely, the transmission of the anti-Rh agglutinins from the mother to the foetus. It was especially logical since it had previously been demonstrated that such a condition does exist with such immune bodies as those from measles. If this occurred, it would be natural that the anti-Rh agglutinins could have a very damaging effect on Rh positive foetus. Levine and his co-workers[4] investigated this and showed statistically that in at least 90% of cases of proven erythroblastosis foetalis, the father was Rh positive, the mother was Rh negative, and the foetus Rh positive. The accompanying diagram attempts to demonstrate the theory of the mechanism of this process. If a sufficiently high titer of anti-Rh agglutinins is attained in an Rh positive foetus, it could easily set up the chain of events of anemia, jaundice and hydrops in the foetus.

From the foregoing discussion, certain very practical applications will be evident.

I. In transfusing a Rh negative individual, ideally an Rh donor should be used, especially so if patient is receiving repeated transfusions.

II. If facilities for Rh typing are not available, at least a warm cross match at 37.5 degrees centigrade should be done.

III. In pregnant or post partum women, it becomes especially important to use Rh negative blood for Rh negative recipients and even more so if there is any suspicion whatever of erythroblastosis foetalis. As a general rule a husband should not act as a donor for a pregnant or post partum woman.

IV. Infants suspected of having erythroblastosis foetalis should always be given Rh negative blood and should not be given mother's blood with its anti-Rh agglutinins, unless it is given in the form of washed red blood cells.

In addition to these precautions directly related to the Rh factor, there are two other precautions which should be taken following any transfusion reaction, and as far as I can find are not commonly done in any of the local hospitals.

I. If any patient who has had any type of transfusion reaction, even though it is suspected to be pyrogenic in origin, a urinalysis for hemoglobin should be done using one of the various chemical test of which Meyers' test is probably the best.

II. Probably a wise precaution in any transfusion reaction is to give large doses of an alkaline substance in an attempt to alkalinize the urine and minimize the formation of dangerous acid hematin.

926 E. McDowell.

FIGURE I

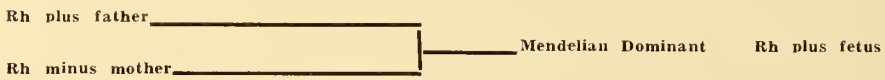
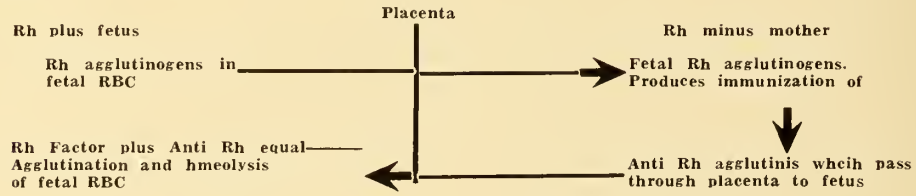


FIGURE II



BIBLIOGRAPHY

1. Landsteiner, K. and Wiener, A. S.: An agglutinable Factor in Human Blood Recognized by Immune Sera for Rhesus Blood. Proc. Soc. Exper. Biol. & Med. 227; 857-882 (Dec. 3) 1942.

2. Wiener, A. S. and Peters, H. R.: Hemolytic Reaction Following Transfusions of Blood of the Hormologous Group with Three Csaes in Which the Same Agglutinogen Was Responsible. Ann. Int. Med., 13: 2306-2322, 1940.

3. Levine, P. and Katzin, E. M.: Isoimmunization in Pregnancy and the Varieties of Isoagglutinins Observed. Proc. Soc. Exper. Biol. & Med., 45:343, 1940.

4. Levine, P., Vogel, P., Katzin, E. M. and Burnham, L.: On the Pathogenesis of Erythroblastosis Fetalis: The Statistical Evidence, Science, 94:371-372, 1941.

GANGRENE OF THE THIGH

(Case Report)

HENRI S. DENNINGER, M. D.
Glendale, Arizona

ON April 28, 1943, at about 10:00 A. M. the patient, a 43 year old white male, suffered a severe laceration and crushing and contusing of the muscles on the outer side of the right thigh. This injury was incurred when he slipped on a rafter and his leg fell down into the revolving clutch on the overhead power drive on a feed mill. He was given emergency first aid treatment by a local doctor and sent to Good Samaritan Hospital. Approximately twelve hours elapsed before he received any further medical attention.

This patient was first seen by me that evening. There was a large V-shaped incision on the outer side of the right thigh, both arms of the V about fourteen inches in length, the apex pointing toward the knee. Seven inches back from the apex all the skin was necrotic and greyish green in color. At the upper end of the flap gas could be detected on palpation. It should be noted here that the entire wound had been sewed up, and that an opening in the lower part of the thigh had been made and a small gauze drain inserted. As far as could be determined the above procedure and the administration of 1500 units of tetanus antitoxin constituted the initial treatment.

The patient was given 10,000 units of gas-gangrene anti-toxin, and Dr. Henry Williams was called in consultation. Deep X-ray therapy was started immediately and following the first treatment, the patient was taken to surgery (4-29-43). By this time he was very toxic, with a temperature of 100°, pulse of 130, and the definite odor of gas gangrene was present. At this opreation, the wound was opened in its entirety and exposed a greyish green putrid mass of muscle and fascia. The necrotic macerated portions were gradually dissected free, down to what appeared to be good healthy muscle tissue.

Presented before staff, Good Samaritan Hospital, March, 1944.

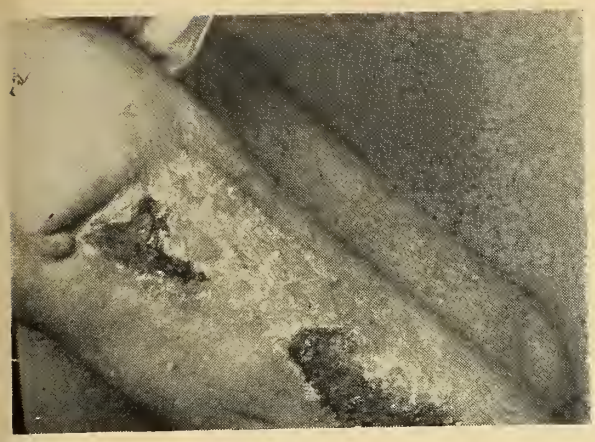


Plate No. 1. This photograph was made January 5, 1944, and indicates the extent of successful skin grafts at that time. The small narrow bridge of skin in the lower portion of the wound broke down before the next operation was performed.

A small strip of the fascia lata was left intact. In cleaning the wound, it was found that numerous pieces of hay, seed, grain and other foreign material had been sewed into the wound without any apparent attempt at cleaning. Following debridement the wound was irrigated with normal saline solution, and approximately 45 grams of sulfanilamide powder was sprinkled into the wound. Hemostasis was secured, and the wound covered with gauze. A small drain was inserted in the pocket extending downward on the lateral side of the knee and opening below the head of the fibula.

The patient was returned to the room in fair condition; and his condition for the next five days was serious but not critical. Then, on May 6, 1943, further debridement was decided upon, as the condition of the wound appeared to be getting worse and there were numerous pockets of pus and fresh necrotic material. Under pentothal anesthesia, practically all of the fascia lata was removed from the lateral side. All the remaining portions of the vastus lateralis muscle were removed as well as all the muscle tissue adjacent to the femur in its lower two-thirds of the thigh. The wound was then thoroughly irrigated with saline and a large skin flap was removed from the upper portion of the wound, exposing the muscles under the iliac crest. These muscles were then divided longitudinally with incisions and thoroughly irrigated with peroxide and sprinkled with sulfanilamide. It must be realized that practically the lower lateral half of the femur was completely exposed. The day following this operation, the patient had a severe chill and the rectal temperature was recorded in the late afternoon at 107.6° Following this his temperature dropped to around 100 to 101, and in six days returned to a normal level, to stay there during his remaining time in the hospital.

Aside from these operation, I believe that treatment in general can best be established by tabulation.

1. Gas gangrene antitoxin—From April 28, to May 13, 1943. Antitoxin was given, 2cc every three hours day and night, totaling 300,000 units.
2. Blood transfusions — Fifteen blood transfusions; one of 500cc following the first debridement, followed by fourteen of 250cc each given as indicated up to May 20, 1943.
3. X-ray therapy — April 29 to May 3, 1943. Three treatments at 50R units each and three at 100R units.
 X-ray therapy was discontinued because the roentgenologist in charge felt that therapy was rather futile for a "dead person."
4. Blood counts showed nothing characteristic for the condition, except for the white blood count, which went over 24000 during his critical period.
5. Wound cultures—4-30-43 Positive for Clostridium Welchii.
 5-23-43 No growth after 60 hours.
 5-29-43 Slight growth of Clostridium Welchii.
 After this the next six cultures were



Plate No. 2. This photograph was made April 1, 1944, approximately two months after the second skin grafting operation. The wound is now completely covered, and all new skin is healthy in appearance. There has been marked improvement in the skin texture and return of sensation in the five months that the patient has been at work.

negative, there having been fourteen in all.

6. Care of the wound:

(a) Intramuscular oxygen: This was given by having oxygen flow into a tube which branched and terminated in six large intravenous needles, which were inserted into various portions of the remaining muscle crevices and pockets. The amount of flow was determined by having it bubble through water. After using all one night it could be safely said that the next morning the patient was thoroughly oxygenated, because crepitus could be detected anywhere and everywhere on his body. This method was changed and oxygen was administered only one half hour, three to four times a day.

(b) The wound on the thigh was irrigated with Dakin's solution three times a day. However, in time this caused considerable pain and distress. Therefore in order to continue the beneficial effect of this irrigation the wound was first treated for about ten minutes with 1% novacain solution. As granulation tissue began to fill in the large defect in the thigh, triple analine dye was applied to the upper portion of the granulating wound.

(c) Sulfathiazole powder, crystals and ointment were tried on other portions of the wound. The crystals seemed to help the general condition at first, but later appeared of no value, and as the wound gradually became clean and free from infection, urea crystals were sprinkled on about twice a day, and seemed to greatly augment the production of granulation tissue.

On June 15, 1943, the patient was removed from all isolation precautions, and on June 20, was allowed up in a wheel chair. The same day extensive hives developed over the entire body and lasted three days—but were successfully controlled by adrenalin injections as needed. On August 28, 1943, a surgical repair was done of the skin defect overlying the newly developed granulation tissue with twenty-six Tiersch grafts, covering an area 11½ by 4 inches. These grafts, taken from the abdomen, were covered with perforated cellophane and given further general care. All twenty-six grafts were successful: see plate No. 1. On January 27, 1944 the lower portion of the wound was skin grafted with 51 Tiersch grafts, covering an area 14 by 2 inches. These proved very successful, and only a few of the entire number were lost. On March 10, 1944, the patient was discharged from the hospital; at this time the wound and all the skin grafted region were in excellent condition, and were kept moist with a thin film of Vitamin A and D ointment. The results of this therapy are clearly seen in Plate No. 2. On June 23, a perforated plate of heavy aluminum was fitted over the wound, and the sides protected by padding, so that the patient could wear trousers and feel protected against any injury to that portion of the thigh. He was given several weeks in which to accustom himself to the wearing of this protective brace, and on July 11, 1944, he returned to his usual work.

107 East A Ave.

PENICILLIN IN AN UNUSUAL CASE OF PERITONITIS

W. H. OATWAY, JR., M. D.
Tucson, Arizona

THE rapid and complete action of penicillin on general and focal infections is of current interest. Certain cases illustrate its effect in situations which have been considered desperate and even hopleess. The present case is a local example of a remarkable result.

The patient was a white female child of 28 months. She had been normal until the age of 22 months. At that time a series of respiratory infections resulted in a nephrotic syndrome which became progressively more severe. Blood, urine and physical signs were typical. Sulfadi-

azine and sulfamerazine were successfully used to control the febrile respiratory infections. Penicillin failed to clear a pneumococcus type VI pharyngitis, and the organism was found to be penicillin-resistant in vitro. Treatment with thyroid extract was not helpful; transfusion was of some supportive value. The child was then in the care of Dr. Rustin McIntosh, of Babies Hospital in New York City, and Dr. John Lyttle, now of Children's Hospital in Los Angeles.)

In an effort to reduce the frequency of respiratory infections, the child was brought to Arizona by airplane in June 1944. (She was referred by Dr. Vivian Tappan of Tucson, then in New York.) Nausea, vomiting, and diarrhea occurred throughout the trip on the plane, subsided 24 hours after arrival and recurred 24 hours later. Edema of the legs and face was moderate, but there was a considerable ascites present.

On the 5th day after arrival, the food intake was fair, the stools were loose, but mucus was the only abnormality. The temperature then abruptly rose to 103° rectally. The symptoms of fever, the mild diarrhea, and emesis during a 12 hour period were the only points in progress.

Sulfamerazine (2 gm. per 24 hours) was started, and the tolerance was good. Kaopectate and a semi-liquid diet were given. An enema tip or a tidal-wave easily controlled the tympanites. No change in the signs, symptoms or fever occurred, except a possible slight increase in the ascites. A urinalysis showed three plus albumen but no infection.

On the 3rd day of fever it was decided to remove the accumulation of peritoneal fluid. An epidemic of entero-colitis in the community, and in several eastern cities, was current. Aspiration might relieve pressure on the colitis, reduce the respiratory embarrassment, and exclude a possible source for the fever.

One thousand cc. of slightly cloudy fluid was removed from an area below the umbilicus. The total ascites was probably reduced by two-thirds. The needle tract drained for three days and then closed.

Cultures containing para-amino-benzoic acid showed a growth of staphylococcus (later identified as albus) from both specimen tubes. The organism was therefore sulfa-resistant and the use of sulfadiazine was stopped. The white blood count was 23,700 with a neutrophilia and a predominance of young cells.

Penicillin was administered at once, 10,000 units being given intramuscularly in the first dose, followed by 5,000 units every three hours until 100,000 units has been given. There was no untoward reaction.

The temperature, which had ranged between 101.8° and 105.6°, dropped to 98.4° fifteen hours after the first dose of penicillin, and did not rise above normal thereafter. The Clinical condition slowly improved, and the food intake and bowel functions approached normal during the first week after lysis of the fever. The edema gradually decreased, but the ascites again increased. (The albuminuria was then about 14 gm. with an A*G ratio of 0.7.) Thirteen days after the first aspiration, a second abdominal paracentesis produced a fluid which was almost clear, and which was negative by culture at 48 hours. The later course was that of an improved neperosis.

PENICILLIN IN EAR, NOSE AND THROAT

DR. W. H. WOERN, M. D.
Phoenix, Arizona

BECAUSE of the difficulties connected with the administration of Penicillin and the ease of administering Sulfanilimide derivities, the use of Penicillin with the average case of ear, nose and throat infections, has not been extensive.

Presented before the Staff of St. Joseph's Hospital, Dec. 11, 1944.

Excepting for the acute stage of an ordinary cold, Penicillin and the Sulfanilimide drugs have little or no effect in the average sinus infection. If we could maintain the normal function of the nasal structures throughout the common cold, we would probably have little or no sinusitis. It is necessary in treating a case of sinus infection to restore the psysiology of

the nose rather than to control the infection. The use of tampons, antrum lavage, displacements, heat, suction, x-ray therapy, chemo-therapy and vaccines will clear up most cases varying the treatment as seems indicated. Allergy is probably the captain of the causes of chronic sinus infection and it must be controlled before relief can be expected. There should be close cooperation with the allergist. Less extensive surgery, as submucous resection and antral windows may be indicated to obtain permanent end results. It does not seem that the miracle medicines will do this.

Of course it is understood Penicillin is reserved more for the overwhelming infections for which everything else has failed. Using Penicillin for those cases that respond badly to other measures, and continuing it with the Sulfanilimide drugs, and the other measures at our command, we probably gain our objective by the added effects of the Penicillin rather than by it alone. I think this was definitely born out in a recent case of ethmoid abscess. In this case Sulfanilimide, antral lavage and nasal tampons were maintaining a normal temperature without pus formation for some ten or twelve days at which time all were stopped and Penicillin was given alone. Pus was present with bony necrosis and temperature rise after seventy-two hours. This patient received 1,250,000 U. in five days with what seemed like bad end results. Staphylococcus toxoid then produced very nice results in two weeks, with cessation of drainage in a month. The Literature stresses the fact that surgery will probably be necessary, and that the best results are postoperative.

Complications of sinus infection such as osteoitis of the sinus wall, extra dural abscess, meningitis, brain abscess, orbital cellulitis, and blood stream infections show better results with Penicillin and the Sulfanilimide drugs than uncomplicated sinusitis.

Local application of Penicillin, sprays and gargles have been found, effective in relieving the common cold. The duration has been shortened to two or three days in a high percentage of cases and the symptoms have subsided early. Sinusitis is much less common.

Uncomplicated acute infections of the middle ear seem to respond very readily to Penicillin with absolute cure. But chemotherapy is the measure of choice because the patient can take his medication at home without an attendant and it controls the greater part of cases. Chronic draining otitis media seems to respond well to lavage of the ear, Sulfanilamide, x-ray and vaccines, except an occasional case which will require surgery Penicillin may give very good end results. It seems probable that it would not prevent recurrent attacks of drainage when the perforation of the drumhead persisted and the Eustachian tube remained open leaving the individual exposed to subsequent infections from the nose or from the outside.

Complications of otitis media, extra dural abscess, meningitis, brain abscess, lateral sinus thrombosis, and blood stream infections are definite indications for Penicillin together with extensive surgery.

Penicillin probably has not been used with throat infections, but it should give equally as good results as Sulfanilamide, or better.

Now in closing it is reported that frequent local applications of Penicillin to the nose and throat will shorten the duration and lessen the symptoms and complications of a common cold.

Penicillin will relieve the pain and fever in acute sinusitis, but it probably will not bring complete relief.

Penicillin in chronic sinusitis probably is of as little effect as Sulfanilamide. Complications of sinusitis should receive Penicillin. Acute middle ear infections respond very well to Penicillin. Chronic otitis media is not markedly improved. Complications of middle ear infections should be operated and receive Penicillin. Penicillin should supplement other treatments rather than replace them. Penicillin is non toxic and may be used in place of Sulfanilamide when complications as nephritis are present.

15 E. Monroe.

VITAMIN ADVERTISING AND THE MEAD JOHNSON POLICY

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson & Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

Cancer Section

BASAL-CELL EPITHELIOMA

Ludwig Lindberg, M. D.
Tucson, Arizona

The typical basal-cell epithelioma is perhaps the most common of all malignant tumors.

Basal-cell epithelioma may originate from the basal cells of the epidermis, from hair follicles or other skin appendages. This tumor is limited to the skin; it does not appear primarily in the mucous membrane although it may invade this structure secondarily. Some investigators believe it originates solely in the hair matrix and call it tricho-epithelioma.

The tumor cells resemble those of the basal cell layer of the epidermis. 10 to 15% of the basal-cell epitheliomas contain prickle or squamous epithelial cells and such tumors form a special variety, the mixed cell type, the baso-squamous-cell epithelioma which is more resistant to irradiation therapy and runs the course of squamous-cell epithelioma.

Basal-cell epithelioma is usually classed as malignant although some varieties (turban tumors, adenoid cystic epithelioma, and cylindroma) are regarded as benign by some authors. It is a tumor of local or low grade malignancy, grade I, and spreads by direct peripheral extension; it may destroy the ala nasae, lip, eyelid, or ear, and may invade cartilage and bone. It does not metastasize to the regional lymph nodes.

Occasionally this tumor grows fairly rapidly, but it usually progresses slowly over a period of years (up to 2 years). It is frequently preceded by senile keratosis, and several years may elapse before induration appears. About 20% are multiple lesions, particularly in the older people.

The site of predilection is the face (the nose, cheeks, inner canthus, and forehead), and less frequently on the neck and trunk.

The four main clinical types are: nodular, papillary, deep, and flat. In the nodular type there may be a well defined induration, a nodule, or a group of nodules which are smooth, firm, pink, and have fine blood vessels on the surface. A large nodule may present a depressed or ulcerated center and rolled edges.

The papillary basal-cell epithelioma may resemble the common wart; it may be pigmented, brown to black, and be clinically mistaken for malignant melanoma.

The deep variety forms a nodule in the derma, with little change in the epidermis. It is frequently of the mixed cell type, the baso-squamous-cell epithelioma.

The flat type is also called psoriasiform cancer or superficial epitheliomatosis. The lesions may be single, but are often multiple and scattered over the body, especially on the trunk, and they may be associated with other skin lesions, such as psoriasis. The lesions are usually pale red, slightly scaly, superficial, and without induration, but later may become deep and ulcerative. This type is characterized by an intra-epithelial growth of tumor cells replacing the normal cells of the epidermis, without downward invasion of the derma, possibly a cancerous metaplasia forming a cancer in situ.

The typical basal-cell epithelioma offers little difficulty in the clinical diagnosis. The flat type without induration usually calls for biopsy. The larger ulcerated lesions can be easily biopsied. The deep variety may have to be excised and examined microscopically to establish the diagnosis.

Today x-ray therapy is the treatment of choice, especially about the face where a good cosmetic result is desirable. On the trunk such tumors can be excised surgically, and successfully if sufficiently wide excision is employed; post-operative irradiation can be given if complete removal is doubtful.

Basal-cell epithelioma responds well to beta irradiation, and in recent years x-ray therapy has replaced the older methods such as caustics, freezing, etc. Low voltage x-rays are used, unfiltered or with 1 mm Al filter; the dosages vary from 2100 to 4500 r, administered in fractional doses on successive days, dependent on the size and the character of the lesion.

There should be no deaths from basal-cell epitheliomas.

REFERENCE

MacKee, George M.—X-rays and Radium in the treatment of Diseases of the Skin.

ARIZONA MEDICINE

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Editorials

Our First Anniversary

This issue marks the First Anniversary of Arizona Medicine. It was a venture to which considerable uncertainty was attached. Without a back-log of Scientific Articles to begin with, combined with the abbreviated and curtailed Medical Meetings that are being held during the war, there was grave doubt as to whether there was sufficient material to publish a Journal. But in spite of the fact that every physician is doing at least twice as much work as he should, or cares to do, the members of the society have been very co-operative, and generous of their time, in providing plenty of material. We wish also at this time to acknowledge the compliments, and words of encouragement, which we received from the editors of numerous other state publications, when our new Journal made its appearance on their exchange lists.

Individual or Collective?

In another part of this issue, appears an abstract of a scholarly address delivered this past summer before one of our National Medical Societies by a member of the U. S. Department of Justice. It is entitled "Justice and the Future of Medicine." It might also be entitled "As Others See Us." If the thoughts of this learned man represent a cross section of the minds of the American Public, few will deny that the Medical Profession is "on the spot." But if medicine is changing, much of the change must be attributed to the tremendous scientific progress that is constantly going on, as well as economic factors. The fact is universally known that Americans have the best system of medicine on the face of the earth. But the only man who comprehends and visualizes the secret of this great system is the physician in the private practice of Medicine. He alone understands the meaning of the physician-patient relationship. And this combined with the principle of competition explains the high type of service the profession is rendering.

But the regretable thing is that this private practitioner is too busy, especially at this time, to give his attention and the wisdom he has gained to this 'new order' which we are told is inevitably on its way. The result is that too many minds, untrained medically are at work solving 'our future'.

A group of physicians is the most deliberative group of individuals that can be congregated. They have the reputation for disagreeing. For that reason they are easy prey for the politician. And we find many doctors accepting the propaganda put out by our enemies as facts.

Prior to the recent election the Maricopa County Medical Society refused to take a collective stand publicly against the proposed $60 at $60 amendment. In other words they refused to vie with a bunch of scheming, ham and egg politicians who came into the state and propagandized our old people into thinking that this was the best way for them to get a pension. They are the same scheming politicians and racketeers who are trying to sell the Wagner-Murray-Dingal Bill to the American people. Our old people didn't want the $60 at 60 amendment. They only want a pension. And the American people do not want the Murray-Wagner-Dingall Bill. They only want the medical care which it offers them.

Our population can be divided into 3 groups (1) the upper class comprising about 6%-8% who are capable of meeting all Medical expense (2) the great middle class and low income groups, and (3) the indigent groups. The third group will always be dependent on both local authorities and the Federal Government. But it is this great middle class and low income

group that need help in meeting their medical expense. And it is the fervent hope this help will be found in the voluntary, pre-payment, non-profit hospital and medical services which are being organized and expanded throughout the nation. It is estimated now that about 25 million Americans are benefiting, at least in some way, by these services. But the objective of Organized Medicine is to increase these figures at least three-fold. It is not difficult for the private practitioner to visualize the doom of such legislation as the Wagner-Murray-Dingall Bill, but unless he succeeds in getting it across to the American Public, they are very liable to witness another noble experiment in the not distant future, or by the time we reach another economic depression.

"Expert Testimony"

A recent murder trial in the city of Washington brought together a long array of medical expert testimony, and, as is usual in such cases, there was the pro and con element. From the newspaper reports of this trial, both parties to the shooting being professional men and the trial therefore attracting more than usual attention by the press, it was clear that this medical testimony was quite at variance. In the editorial columns of "Medical Annals of the District of Columbia", for July, 1944, appear comment on this subject that is worth repeating, since it succinctly points out the many evils pertaining to our present conception of what medical expert testimony should be. It is printed herewith:

> "A recent criminal trial in the District Court has called attention again to a perennial problem, that of expert medical testimony.
>
> "In a criminal case the emotions of the public may run high, sides are taken, and there is a demand for vengeance by some, while others urge acquittal. In short, the trial, instead of a forum for the search for truth, becomes an arena in which the prosecutor and defense do battle, and anyone who appears as a witness is looked upon as a partisan, whatever his intentions or motives.
>
> "The lot of the medical man, particularly if he be called upon to give an opinion concerning the defendnat's 'sanity', a medically-unrealistic concept, defined by wholly unpsychological standards laid down by legal philosophers a hundred years ago, is not a happy one. Even if he has made an examination of the defendant (and the jail or courtroom is hardly comparable with the hospital or office), he is subjected to various hypothetical questions, which, like as not, merely befuddle the jury. Further, the fact that he is produced by one side or the other makes his testimony suspected as presumably biased. It is, of course, axiomatic that a lawyer will not knowingly call an expert whose opinion is greatly at variance with the former's theory of the case.
>
> "The Commissioners on Uniform State Laws proposed a bill about 1937, which, although a substantial advance, has not yet been adopted in toto in any jurisdiction. If the law lags in expecting progress, however, the medical profession at least have it in their power to bring about improvement by voluntary action. Consideration might well be given to a policy under which no psychiatrist would agree to act as expert unless it were stipulated that his examination should be made jointly with the other experts employed by both parties, and that a joint report should be submitted. In this manner the testimony would deal with the same facts and much would be accomplished toward eliminating the appearance (perhaps the fact) of bias. The expert, at least, should do his part, despite any examples which may be set him, in seeking to learn and present the truth as clearly and impartially as human emotional attitudes will permit."

—Reprinted from the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, October, 1944.

Distribution of Tuberculosis Death Rate

Some of the major battles of the national tuberculosis control program recently authorized by Congress will be waged in the ninety-two cities of 100,000 or more population, where about one out of every three tuberculosis deaths occurs, and where the average tuberculosis death rates are about one third higher than in smaller towns and rural areas, Dr. Herman

E. Hilleboe, chief of the Tuberculosis Control Division, the U. S. Public Health Service, Federal Security Agency, said on August 3.

The Public Health Service has published tabulations, based on data from the U. S. Bureau of Census for the three year period 1939-1941, centering around the census of 1940, Dr. Hilleboe said, which show extreme variations in the death ratse for tuberculosis in large cities from as low as 15.6 per 100,000 among white persons in Grand Rapids, Mich., to as high as 275.5 per 100,000 persons among non-whites in Newark, N. J.

"Studies are being made to discover what favorable conditions are responsible for the low tubereulosis death rates in some of our large cities," said Dr. Hilleboe, "and several of the cities with high mortality rates already have undertaken vigorous tubereulosis control programs to find and remedy the causes for their large tubereulosis death rates."

The average yearly tubereulosis death rate in the ninety-two large cities was 55.4 per 100,000 population compared with rates of 43.5 in places of 2,500 to 100,000 population, and 41.1 in rural areas.

These tabulations show only the "erude" rates for both sexes and all ages, Dr. Hilleboe pointed out.

Other studies, as yet unpublished, show that although tuberculosis death rates for males are higher in cities than in rural areas, the rates among females in rural areas are higher than in cities, except for very young girls. These facts mean that special problems, which must be solved in the national tuberculosis control program, exist in smaller cities and rural areas, as well as in large cities, said Dr. Hilleboe.

Fourteen of the ninety-two cities had tuberculosis death rates of less than 30 per 100,000 among all races. These cities, and their rates for all races were:

Grand Rapids, Mich., 15.6; Salt Lake City, Utah, 19.3; Minneapolis, Minn., 20.9; Des Moines, Iowa, 22.7; Spokane, Washington, 23.8; Akron, Ohio, 25.1; Duluth, Minn., 25.1; Flint, Michigan, 25.5; Wichita, Kansas, 26.4; Long Beach, California, 26.6; St. Paul, Minn., 26.8; Peoria, Illinois, 27.0; Springfield, Mass., 27.2; Sommerville, Mass., 27.7.

Twelve cities had tuberculosis death rates of more than 74 per 100,000 among all races.

Nashville, Tennessee, 79.3; Norfolk, Virginia, 80.6; New Orleans, Louisiana, 81.0; Baltimore, Maryland, 82.1; Washington, D. C., 82.7; Atlanta, Georgia, 86.5; Memphis, Tennessee, 89.1; Jacksonville, Florida, 89.4; Sacramento, California, 97.5; Chattanooga, Tennessee, 113.7; San Antonio, Texas, 151.7.

Rates for all races were highest in the South Central cities and lowest in the Mountain cities. Rates for whites were lowest in the North Central and the New England and Atlantic states, and were highest in the South Central and Pacific. Conditions were almost exactly opposite for non-whites, for whom rates were lowest in the South Central and the Pacific states and highest in the North Central and the New England and Atlantic.

—Reprinted from NEW YORK STATE JOURNAL OF MEDICINE, October 1, 1944.

Rh Typing Serum

Rh typing serum is now available for all who need it.

This should be welcome news to the obstetrician and to the physician or surgeon administering transfusions, who appreciate the importance of this new blood type and have been concerned because of the lack of diagnostic serum. . . Except for the importance of obstetric complications, the sequelae resulting from the repeated transfusions of Rh— recipients with Rh+ blood are obviously of greater concern to physicians in the armed forces than to those in civilian practice. For the former often uses multiple transfusions in the treatment of hemorrhage, shock, blast or burn injury, or chronic infection, and the one man in seven who is RH— deserves the protection that is offered by this special typing of blood.

The early and, until recently, the chief handicap to differentiation in Rh— and Rh+ red cells was the scarcity of potent, rapidly active serum. The supply of such material was dependent on the identification of high-titered and anti-Rh agglutinins in the blood of the rare woman who built up these antibodies during and maintained them after the birth of one or more infants with erythroblastosis fetalis. Statistically, such an event occurs about once in more than 5,000 deliveries. Even if such women were willing and able to donate a pint of blood frequently, the supply of anti-Rh serum from this source alone would fall far short of meet-

ing the usual demand of civilian hospitals and the expanded needs of military establishments. It was therefore necessary to develop a method whereby larger amounts of Rh typing serum are available for immediate use. . . After the war it seems likely that Rh typing will assume even greater significance than it has at present. Certainly whole blood and resuspended red cells will be readily available and will probably be used freely. The Rh— men returning to civilian life who received one or more transfusions of whole blood during the war may have developed an appreciable titer of Rh agglutinins if Rh— blood was used, and on having another transfusion severe hemolytic reactions may occur following the injection of Rh+ red cells. Furthermore, the current civilian needs for Rh typing will not diminish. For these reasons, proper Rh typing serum will be required in abundance. The present project offers promise of meeting the need.

—Editorial in NEW ENGLAND JOURNAL OF MEDICINE, June 29, 1944 and taken from NEW YORK STATE JOURNAL OF MEDICINE, September 15, 1944.

NEWS FROM THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS, INC.

The 1944 epidemic of infantile paralysis has officially become the second worst in the recorded history of the disease in the United States, it was announced today by Basil O'Connor, president of The National Foundation for Infantile Paralysis.

At the same time, Mr. O'Connor stressed the need for more skilled polio fighters, especially physical therapists, and urged that men and women who have the proper qualifications make applications for scholarships offered by the National Foundation and its Chapters.

In the first 41 weeks of 1944, or up until October 14, there were 16,133 cases of poliomyelitis, according to the latest report from the U. S. Public Health Service. This is 353 cases more than were reported in the country for 1931 which previously had been the second worst year for the disease. The all-time record was in 1916 when there were 27,621 cases.

"Although the peak of the outbreak was passed more than a month ago, the epidemic itself has not yet ended," warned Mr. O'Connor. He pointed out that there were 710 new cases reported for the week of October 7-14, or nearly half the weekly total at the peak of epidemic, the week ending September 2 and when 1,683 cases were reported.

"This great outbreak has tested not only the resources of the National Foundation and its Chapters, but also those of the nation," he added. "The Foundation's greatest problems were in obtaining sufficient doctors, physical therapists and professional personnel to cope with nearly simultaneous outbreaks in widely separated sections of the south, the east and the middle west. Seven skilled polio doctors, 65 physical therapists and nearly 10 tons of wool for use in hot pack treatments were rushed to stricken areas by the National Foundation. All 26 respirators owned by the National Foundation are still in use in epidemic areas. At the request of the National Foundation, the American Red Cross recruited more than 700 nurses from all parts of the country to staff regular and emergency hospitals."

The seven states most severely menaced were New York, North Carolina, Pennsylvania, New Jersey, Virginia, Ohio and Kentucky, but emergency aid in the form of money, professional personnel and supplies has been sent this year by the National Fondation to 21 states and the District of Columbia.

"Although the National Foundation and its Chapters have trained many physical therapists in the modern principles of treating infantile paralysis, many more technicians are still needed for this present fight," said Mr. Connor. "The greatest handicap in rendering effective aid in any epidemic of infantile paralysis has been the lack of physical therapists. The National Foundation for Infantile Paralysis through its scholarships in accredited schools of physical therapy has been and still is seeking to enlarge this first line of defense.

"These scholarships sponsored by the National Foundation are available to graduate nurses, graduates in physical education or those with a minimum of two years undergraduate college work with science courses. Such applications may be made through the National Foundation or to The American Pysiotherapy Association, 1790 Broadway, New York 19, N. Y.

"The field of physical medicine is expanding rapidly and this is an opportunity for men

and women to enter an interesting, lucrative profession with a chance for performing a humane service."

THE AMERICAN REVIEW OF SOVIET MEDICINE

The full story of how surgeons in the USSR are reconstructing male genital organs injured or destroyed in the war has been revealed here for the first time by the Soviet doctor who did the pioneer work in this surgical field.

The doctor is A. P. Frumkin, professor of surgery at the Urologic Division of the Botkin Hospital in Moscow. Writing in the latest issue of *The American Review of Soviet Medicine,* bi-monthly publication of the American-Soviet Medical Society, Frumkin declares that "a complete loss of the external genitalia is a rather frequent occurrence in the present war," and that "this type of injury is extremely serious, since it precipitates the patient into a state of severe depression."

The Soviet physician then describes the stages in which the operation is performed to reconstruct the external genitals, beginning with the formation of an abdominal skin tube into which rib cartilage is inserted. Through these stages, Frumkin declares, "an organ is reconstructed which not only corrects the cosmetic defect but assumes the normal sexual function as well."

This issue of the magazine marks the beginning of its second year of publication. Associate editors who have just been added to the staff are Dr. Gregory Zilboorg, well known psychiatrist, and Dr. Jacob Heiman, Clinician. Dr. Henry E. Sigerist, editor of the journal and director of the Institute of the History of Medicine at Johns Hopkins University, is currently in India, at the official request of the British and Indian governments, where he is making a study of health conditions. Dr. Sigerist is considered the foremost authority on public health in this country. He is expected to return next month.

The current issue of *The American Review of Soviet Medicine* also features a short review of the Rehabilitation Clinic established in the Neurologic Division of the All-Union Institute of Experimental Medicine in Moscow. The author, A. R. Luria, a professor at the clinic, writes that "experience with physical therapy in war time has changed many old concepts still prevalent."

Damage to the brain, Luria points out, "does not necessarily lead to a hopeless functional defect." He adds that physical therapy in many cases can "overcome defects arising from war trauma and permit the patient to regain in some degree his lost working capacity formerly considered impossible."

Soviet experiments in transplantation of tissues from persons who died of non-infectious diseases, to the war wounded, have already received attention in this country. Vladimir P. Filatov, noted Soviet scientist, describes in the journal how the Russians obtain and prepare tissue from human cadavers, and how they are preparing the way toward the use of eye banks and tissue banks as widespread as blood banks.

AMERICAN COLLEGE OF SURGEONS ANNOUNCE 1944 APPROVED LIST OF HOSPITALS

The American College of Surgeons announces that 3,152 hospitals in the United States and Canada are included in the 1944 Approved List. The list is published in the annual Approval Number fo the College Bulletin issued December 31.

A total of 3,911 hospitals were included in the 1944 survey and the approved hospitals represent 80.6 per cent. The first annual survey in 1918 included 692 hospitals of 100 beds or over of which only 89 or 12.8 per cent merited approval. Hospitals of 25 beds and over are covered in the current surveys.

A total of 2,342 hospitals of 100 beds and over were on the 1944 survey list, and 2,182 or 93.1 per cent were approved. A total of 1,119 hospitals of 50 to 99 bed capacity were under survey of which 789 or 70.3 per cent were approved. A total of 450 hospitals of 25 to 49 bed capacity were under survey of which 181 or 40.2 per cent were approved.

On December 31 of each year the ratings of hospitals under survey by the American College of Surgeons automatically terminate. The status of every hospital based upon all data collected from the current survey is reconsidered each year.

Following Arizona surgeons elected to fellowship in F.A.C.S. in 1944: Paul H. Case, Phoenix; Marcus G. Kelley, Miami.

News Releases from Office of Surgeon General

ARMY TREATMENT OF GONORRHEA AND SYPHILIS TOLD BY GENERAL MORGAN

In September 1944, the penicillin supply problem had eased to the point where the Army made penicillin the drug of choice in the treatment of gonorrhea and limited the use of the sulfonomides to cases which did not respond to adequate penicillin therapy or where penicillin was not available through normal supply channels.

Outlining the treatment to The Military Surgeons, Brigadier General Hugh J. Morgan, USA, Chief Consultant in Medicine to The Surgeon General, said that "the initial treatment schedule recommended is 20,000 units intramuscularly every three hours for a total dosage of 100,000 units. Patients in whom a favorable response is not obtained by the third day are re-treated with 100,000 units. When patients fail to respond to the second course, a third course of penicillin totaling not less than 300,000 units, administered in 20,000 unit doses every three hours is recommended. Should this fail, sulfathiazole or sulfadiazine is used, employing a dosage of 4 grams initially, followed by 1 gram every four hours day and night for five days."

"It is too early, of course," said General Morgan, "to evaluate the effect of this new policy regarding the treatment of gonorrhea. There is every reason to believe that we shall look upon it in retrospect as constituting one of the most conspicuous advances made during this war in military medicine, in light of its almost certain favorable effect upon morbidity and noneffectiveness, and this in spite of a rising incidence rate."

In October 1944, the penicillin treatment of syphilis was authorized throughout the Army. "The total dosage for early syphilis and latent syphilis," said General Morgan, "is 2,400,000 units given in sixty consecutive intramuscular injections of 40,000 units at three hour intervals day and night for seven and one-half days. No additional anti-syphilitic therapy is to be given during or after the completion of the course of penicillin, except in the case of penicillin treatment failures. Prior to October 11, 1944, this method of treatment had been authorized for overseas theaters. Since that date it applies also to the zone of interior. Within the limits imposed by this short period of study, we have reason to believe that this method of treating syphilis will be every bit as effective and much less dangerous than any treatment plan heretofore employed."

ARMY MALARIA CONTROL THREEFOLD PROBLEM SAYS GENERAL SIMMONS

The Army has made great progress in the control of its No. 1 disease hazard, malaria, according to Brigadier General James S. Simmons, USA, Chief of the Preventive Medicine Service, who described Army methods of malaria control to The Military Surgeons meeting in New York City this month. In the Army, the problem has two aspects, General Simmons said—control in base areas and protection of troops in combat. The first is primarily mosquito control, and specially trained personnel are required to produce effective results. The malaria control organization in the Army Medical Department includes medical officers trained in malariology, and small survey and control units headed by parasitologists, entomologists and sanitary engineers.

The second aspect—protection of troops in forward and combat areas—depends upon individnal measures of protection in addition to mosquito control, according to General Simmons, and strict malaria discipline must be established and enforced. Soldiers must be drilled in the use of repellents, sleeping nets, protective clothing and insecticide sprays in the same way they are trained to use combat weapons.

Concerning the third aspect — the possible spread of malaria in this country by returning soldiers—General Simmons said that members of the armed forces who have had malaria will be given sufficient treatment to render them free from demonstrable parasites before they are discharged. In addition, men who have had malaria or served in malarial regions are advised to seek prompt medical attention and have a blood smear for malarial parasites in case of illness with fever.

However, he added, prevention of malaria in this country, as elsewhere, depends essen-

tially upon the control of the malaria carrying mosquito.

OFFICE OF SURGEON GENERAL OF US. S. ARMY

Tetanus has been virtually eliminated from our armed forces as a result of compulsory immunization. Major General Norman T. Kirk, U. S. A., Surgeon General of the Army says that not a single case has been reported among completely vaccinated troops and there has been only a handful of cases throughout the entire Army. These occurred prior to vaccination or before the immunization process had been completed. The Navy, which also requires tetanus immunization process, has had no cases of the disease among sailors or Marines wounded in combat up to September 15, 1944, according to the Navy Bureau of Medicine and Surgery.

The most recent account illustrating the value of tetanus immunization was given in the report of a Navy medical officer who served aboard a hospital ship on which 284 Japanese and 384 Americans, all wounded in the same engagement, were being treated. Fourteen cases of tetanus, ten of which were fatal, occurred among the Japanese. None of the Americans developed the disease. Army medical records indicate that the Japanese do not immunize actively against tetanus.

REDUCTION IN THE MEDICAL CORPS OF THE ARMY

A moderate reduction in numbers of Army Medical Corps officers is necessary in order to remain within presently allotted ceilings, the Office of The Surgeon General has announced. The need for Medical Corps Officers in senior grades who are assigned principally to administrative duties is less acute than formerly.

A Board of officers recently appointed in the Office of The Surgeon General is carefully considering the physical and other qualifications of all Medical Corps officers of the various components of the Army and their essentiality to the war effort.

As a result of this Board's study, it is anticipated that a number of separations of the above group will occur in the moderately near future. Regular Medical Corps officers will be accorded retirement privileges under the provisions of Section II, Ar. 605-245, June 17, 1941, and Reserve, National Guard, and AUS Medical Corps officers will be given the opportunity of returning to the practice of medicine in a civilian status by relief from active duty or discharge.

STRENGTH OF THE ARMY MEDICAL DEPARTMENT

In connection with the recent announcement that the Army is no longer recruiting physicians, the following figures are of interest:

The Army Medical Department has grown from 8,010 at the beginning of World War I until it now numbers 680,891. Of this number approximately 44,651 are in the Medical Corps, 14,948 in the Dental Corps, 2,012 in the Veterinary Corps, 2,364 in the Sanitary Corps, 15,078 in the Medical Administrative Corps, 50 in the Pharmacy Corps, 40,305 in the Army Nurse Corps, and there are 559,327 enlisted men, 13 Physical Therapy Aides, and 1,334 Hospital Dietitians.

HEALTH OF ARMY IN U. S.

There has been a very slight seasonal increase from the low summer level in the incidence of colds, influneza and other common respiratory diseases among soldiers stationed in the United States. However, the current rates (October 13) are below those for any other year during the present war. The incidence of meningitis, measles, mumps and the other specific respiratory-transmitted diseases remains at or below the summer level.

INCIDENCE OF POLIOMYELITIS AMONG U. S. TROOPS

In the two-week period ending September 2, 1944, 20 cases of poliomyelitis were reported by Army installations in the United States. This represents a slightly higher incidence than for the corresponding period last year. The total incidence since the first of the year is somewhat lower than in the corresponding 8-month period of 1943. While most of the cases have occurred in the states which have a high civilian incidence of the disease they have been widely scattered.

TYPHUS VACCINE EXTENDED

On the basis of information received from

the National Institute of Health, the Office of The Surgeon General is authorizing the extension of the expiration date on the Army's typhus vaccine from 12 months to 18 months.

MEDICO-LEGAL MEDICINE

IN THE SUPREME COURT OF THE STATE OF ARIZONA

UDALL, Superior Judge:

This case grows out of a claim for compensation filed by respondent, H. W. Green, against the employer and insurance carrier, named in the caption, and hereinafter referred to as the petitioners. The respondent, Industrial Commission of Arizona, on October 1, 1943, made a permanent total disability award to Green. A petition for re-hearing was allowed and the hearing held on December 22, 1943; thereafter, on January 7, 1944, the Commission rendered its decision on re-hearing affirming its original award. The petitioners being dissatisfied therewith have brought the matter before this Court for review, it being their principal contention that the findings and award are not supported by the evidence.

The respondent Green, hereinafter called the applicant, is a white male, who at the time of the injury was 59 years of age. He was a skilled carpenter and structural steel worker, which occupation he had followed for many years. During the two or three years immediately preceding the accident he had not lost any time from work by reason of any sickness or ailments causing disability and he worked steadily, except while going from one job to another, or when he wished to lay off. In the thirty days immediately preceding his injury he earned $281.88; and in the year previous between $2400.00 and $2500.00.

The applicant went to work for Hedrick-Beck-Bate, contractors, one of the petitioners herein, at the Aluminum Plant, near Phoenix, on February 10, 1943. On March 20, while working as a carpenter on the second floor he stepped on a loose board which threw him off balance, and to prevent falling some fifteen feet he caught himself on the cross arm of a ladder and swung by one arm, twisting his body and injuring the lower part of his back and spine.

He was first examinde and treated by Dr. Norman A. Ross who in his initial report to the Commission, dated March 30, described the injury as "right lumbo-sacral sprain and spasm right lumbar." The Doctor further stated that the X-ray diagnosis showed "no recent bony injury." The report made no reference to any other disabling condition not due to the accident, though that specific question was asked. He estimated that the applicant would be able to resume light work in three or four weeks.

Temporary total disability was awarded the applicant by the Commission on May 7, the justness of which is not questioned. The injured man was unable to return to work and on May 27, more than two months after the accident, he was examined by a Medical Board, composed of Doctors A. C. Kingsley, Willard Smith and A. M. Tuthill. Then for the first time "the usual sign and symptoms of Parkinson's disease" were noted in their report to the insurance carrier. In addition the report showed a definite old osteo-arthritis of the spine and pelvis which had been aggravated by the accident. They pronounced him totally incapacitated for any form of manual labor. None of the parties question the fact that the injured man has been unable to perform any work since the accident of March 20, 1943, nor is it contended that he will ever be able to again perform manual labor.

The Industrial Commission, after extended hearings, found that the applicant while employed in the State of Arizona by the above named defendant employer sustained an injury arising out of and in the course of his employment, (The details of the accident and resulting injury and wages earned were recited as we have heretofore set them forth.) and concluded:

> "1. * * * * Prior to his injury, said applicants had a pre-existing arthritic condition of the back which was aggravated by the said injury; and Parkinson's disease which retards recovery."
>
> "3. That said applicant is totally disabled and will continue to be totally disabled for the remainder of his life by reason of said injuries and the aggravation of pre-existing disease and pre-existing disease retarding recovery."

On the basis of these findings the Commission made an award for accident benefits and temporary total compensation amounting to $1185.57, and the additional sum of $183.22 monthly during the life of said applicant for total permanent disability.

The petitioners admit that the applicant was employed by them, that the accident referred to occurred, and that this employee sustained an injury, arising out of and in hte course of his employment, to his back justifying the temporary total disability award. However they vigorously resist the final award which in effect requires them to pay for disability from a Parkinson's disease, which they claim all the medical evidence shows was not caused, nor aggravated, by the injury. Furthermore, they contend that the Commission in making the award based it upon the aggravation of a pre-existing arthritis condition of the back and that the evidence does not justify a finding of 100% disability on that score alone.

It might be well to first consider the nature

and symptoms of Parkinson's disease. This disease, known to the medical profession as paralysis agitans, and to the layman as shaky palsy, according to all of the medical testimony *in this case*, is a slow progressive disease involving the basal ganglia, mainly in the corpora striata, which might be termed as the central station. From this we have minor nuclei which have control in coordinating our muscular actions. The basal ganglia is in the lower part of the brain, just as the brain begins to form in the spinal cord. It is well protected by the skull and in the lower part by the cushion of the spinal fluid meninges. There are two types of the disease:

1. The type that frequently follows encephalitis, which may occur at any age.

2. The senile, arterial-sclerotic type, which the applicant was afflicted with, usually begins when a person is between 50 and 60 years of age and may extend from 5 to 15 years.

The cause of the disease, so Doctors Kingsley and Smith testified, is unknown to medical science, and it is incurable. One Doctor used this illustration, he said: "Parkinson's disease is like a light filament that burns out and swings and when it contacts there is a momentary light; that there you have ten thousand of these swinging and momentary contacts you get all sorts of combinations; that there are thousands of these swinging filaments in the nerve centers and that they hit and miss without rhyme or reason."

The symptoms are: In the beginning a slight pain in the back, usually affecting one side before the other. Following soreness and slight pain there will be a rigidity which may extend over the entire body; a rigidity and tremor; later there is characteristic facial expression with considerable salivation and difficulty in standing.

In this case the medical testimony is *remarkably free from conflict;* all of the Doctors who testified about the matter were in agreement, (a), that the applicant had been afflicted with Parkinson's disease for a "long time" prior to the injury, though he may not have been aware of it; (b) that the accident did not cause him to have Parkinson's disease; (c) that this disease was not aggravated in any way or manner by the injury; (d) that it was virtually impossible for this disease to be caused or aggravated by trauma; (e) that this disease was principally responsible for his present total permanent disability; (f) that there was no causal relationship between the Parkinson's disease and the injury.

While there might be some isolated sentence in the medical testimony that could be tortuously construed otherwise, we think this is the fair import of the testimony on this matter. We of course do not weigh the testimony, but only search the record to see whether the Commission's findings are supported by any substantial evidence, even though there might be other contradicting evidence.

There is however ample testimony in the medical testimony that could be tortuously construed otherwise, we think this is the fair import of the testimony on this matter. We of course do not weigh the testimony, but only search the record to see whether the Commission's findings are supported by any substantial evidence, even though there might be other contradicting evidence.

There is however ample testimony in the record to show that the applicant prior to the injury had an arthritic back, and that the injury relied upon aggravated the pre-existing arthritis *which is undoubtedly the partial cause of his present total disability.* One of the Doctors referred to this condition as "*crippling arthritis*", but none of them testified that he *was wholly permanently disabled from this arthritic condition. The referee refused to permit any examination by the petitioner seeking to establish percentages due to each cause, so that an apportionment might be made by the Commission. We discuss this ruling on evidence later.*

The law with reference to pre-existing diseases is clearly stated by Dr. Schneider, he says:

> "The courts, consistent with the theory of the Workmen's Compensation Acts, hold with practical uniformity that, where an employee afflicted with disease receives a personal injury under such circumstances as that he may have appealed to the act for relief on account of the injury had there been no disease involved, but the disease as it in fact exists is by the injury materially aggravated or accelerated, resulting in disability or death earlier than would have otherwise occurred, and the disability or death does not result from the disease alone, progressing naturally, as it would have done under ordinary conditions, but the injury aggravates and accelerates its progress, materially contributes to hasten its culmination in disability or death, there may be an award under the Compensation Acts."
>
> 1 Schneider on Workmen's Compensation, p. 312, Sec. 138.

Our decisions are entirely in accord with this view. Hartford Acc. Etc. Co. v. Hart 45 Ariz. 198, 41 Pac. (2d) 1089; Hunter v. Wm. Peper Construction Co. 46 Ariz. 465, 52 Pac. (2d) 472; Paramount Pictures, Etc., v. Industrial Com. 56 Ariz. 217, 106 Pac. (2d) 1024; Dauber v. City of Phoenix 59 Ariz. 489, 130 Pac. (2d) 56.

It is significant that the Commission, in this *case, did not base* its award upon the injury causing an aggravation of the Parkinson's disease. The award merely states that the latter

disease *retarded recovery* of the aggravated arthritic condition. If the only effect of a noncompensable disease is to retard recovery from a compensable injury and it does not in any manner tend to prevent ultimate recovery from such injury, then that retardation may be considered in awarding compensation for temporary disability, but it may not be considered in awarding for *permanent disability.* We are not here concerned with a temporary disability award. *It would seem that if, at the time of the award, the Parkinson's disease was retarding recovery of the arthritic condition, then the applicant had not recovered. If he had not recovered therefrom then his condition had not become stationary or static and an award for permanent disability on that ground would be premature. Ossio v. Verde Central Mines, 45 Ariz. 176, 49 Pac. (2d) 396.*

Respondents' counsel cite us to four cases where awards of Industrial Commissions in other states were upheld in granting compensation for an aggravation of Parkinson's disease, in these cases doctors testified that trauma may lend to or result in an aggravation of a latent Parkinson's disease. That this affliction is one which follows upon the heels of an injury, trauma, or infection, or emotion. Hartford Accident & Indemnity Co. v. Industrial Com. 64 Utah, 276, 228 Pac. 753; Moffett v. Bozeman Canning Co. 95 Mont. 347, 26 Pac. (2d) 973; Barkhurst v. Department of Labor and Industries 150 Wash. 551, 274 Pac. 105; Natalini v. Riefler & Sons, Inc. 286 Pac. 301, 133 Atl. 547. The medical testimony in those cases is so at *variance with that found in this record that it adds proof to our statement made in the case of Riee v. Tissaw, 57 Ariz. 230, 112 Pac. (2d) 866, "that medicine is not an exact seience."*

It further appears that at least one recognized medical text, in speaking of the arteriosclerosis type of paralysis agitans, states:

> "It was in these cases that emotional disturbances *and injuries* were supposed to have played a part."

(III, the Cyclopedia of Medicine, 634, published by F. A. Davis and Company)

and,

> "Trauma may at times be the precipitating agent in the production of the syndrome."

(III, The Cyclopedia of Medicine, 635.")

These highly persuasive cases can be of no avail to the applicant here for the simple reason that there is no medical testimony supporting such a claim. Knapp v. Arizona Highway Dep't, 56 Ariz. 54, 140 Pac. (2d) 180; Almanza v. Phelps Dodge Corp. 57 Ariz. 150, 112 Pac. (2d) 215; Cackos v. Stanley Fruit Co. 55 Ariz. 72, 98 Pac. (2d) 471. And for the further reason that the award is not bottomed upon an aggravation of the latent Parkinson's disease.

While it is true that the employer is not the insurer of the health of his employees, Rose v. Goldberg Films 50 Ariz. 349, 72 Pac. (2d) 452, *yet he takes the employee subject to his condition when he enters the employment.* Dauber v. City of Phoenix, supra; In Re Madden 222 Mass. 487, 111 N. E. 379.

The Supreme Court of Utah in the case of Pinyon Queen Mining Co. v. Ind. Comm. 59 Utah 402, 204 Pac. 323, well stated a principle that is equally applicable to our statutory law, we quote:

> "The statute prescribes no standard of fitness to which the employee must conform, and compensation is not based on any implied warranty of perfect health or of immunity from latent and unknown tendencies to disease which may develop into positive ailments *if incited to activity* through any cause originating in the performance of the work for which he is hired."

An employer is not however responsible for disability, causing a loss of earning power, resulting from a pre-existing disease, unless the disease is proximately produced or aggravated by the injury complained of. New River Coal Co. v. Files, 315 Ala. 64, 109 So. 360. The law does not cover loss of earning power arising from some extreneous cause. In other words, it is only those injuries which are proximately caused by the accident that are compensable. Proximate cause is defined as:

> "The nearest independent cause which is adequate to and does produce the result, or in other words, the nearest in relation to cause and effect." 45 c. J. 908.

The burden of proof of all the material elements necessary to sustain an award under the Compensation Act is always upon the applicant. Wiggins v. Pratt-Gilbert Hdw. Co., 48 Ariz. 375, 62 Pac. (2d) 124; Dauber v. City of Phoenix, supra; Vest v. Phoenix Motor Co. 50 Ariz. 137, 69 Pac. (2d) 795. We feel that in the instant case the applicant has failed to successfully carry this burden of proof. *The record* does not disclose any casual connection between the injury and the aggravation of the latent disease of paralysis agitans. Certainly *from this record* the Commission could not properly find that the injury of March 20, 1943, was the proximate cause of the Parkinson's disease, or any aggravation thereof.

Lastly, we consider the petitioners' assignment of error based upon the refusal of the referee who conducted the hearing to permit the medical experts to testify as to the percentage of *permanent disability* the applicant suffered by reason of the injury which aggravated the pre-existing arthritic condition.

The statutes of Arizona expressly authorize

the Commission to appoint an examiner or referee. Sections 56-905, 56-907, and 56-912, A. C. A., 1939. Johnson v. T. B. Stewart Const. Co. 37 Ariz. 250, 293 Pac. 20.

The petitioners complain of the failure of the Commission itself to hear the testimony and rule directly upon the admissibility of evidence. At the oral argument it developed that the Commission rarely, if ever, conducts a hearing, leaving it invariably to a referee to take the testimony and then they review the "cold record" and make findings upon which the award is based. Though they have the power to follow this procedure, we seriously doubt whether the legislature contemplated that this should be the rule rather than the exception. It would seem that the Commission, as the ultimate trior of the facts, is handieapping itself in these comparatively few contacted cases by not observing first hand the character of the witnesses, their appearance and deportment upon the stand and the many "intangible" things occurring in a hearing that perforce do not appear in the printed record.

It necessarily follows that if a referee is to conduct an orderly hearing that he has the power and the duty to rule upon the admissibility of evidence. However, if the effect of his ruling is to prevent the Commission from having before it when it makes its findings and award relevent and material evidence which was excluded from the record by the referee, the award must be set aside. This for the same reason that the judgment of a trial court would be reversed if it erroneously excluded evidence of that class from the consideration of the jury. Egelston v. Ind. Com. 52 Ariz. 276, 80 Pac. (2d) 689.

We are thus to consider whether the proffered medical testimony which was exeluded was material. From what we have previously stated and as the record now stands it is apparent that the referee did exclude relevant and material evidence that had a direct bearing and should have been considered by the Commission on the matter of apportioning the disability of the applicant, between the effect of aggravated arthritis and that of the non-aggravated Parkinson's disease. The referee and Commission were led into this mistake through their erroneous interpretation of the statutory law. They considered that sub. (d) of Sec. 56-957, A. C. A. 1939, reading in part:

> "In determining the percentage of disability, consideration shall be given, among other things, to any previous disability, the occupation of the injured employee, the nature of the physieal injury, and the age of the employee at the time of the injury. In case there is a previous disability, * * * * the percentage of disability for a subsequent injury shall be determined by computing the percentage of entire disability and deducting therefrom the percentage of previous disabiliyt as it existed at the time of the subsequent injury"

as only applying to the "scheduled injuries" set forth under sub. (b), supra; whereas, we have held in two eases that the quoted subdivision also applies to the "other cases" or "odd lot cases" referred to under sub. (c) of the same section. Kilpatrick v. Hotel Adams Co. 42 Ariz. 128, 22 Pac. (2d) 836; Hoffman v. Brophy.....Ariz....., 149 Pac. (2d) 160. We stated in the case last cited, however, that "*percentage of disability*" means "the percentage of disability to earn his former wages", and the "percentage of functional physieal disability" attributable to the injury in this ease, which the petitioners were not permitted to develop and show, is only one of the factors to take into consideration in determining the applicant's impaired "ability to earn."

The Rhodes case, cited as Lee Contracting Co. v. Ind. Com.....Ariz....., 143 Pae. (2d) 888, was also erroneously interpreted by the referee and Commission. Thye construed this statement of the opinion:

> "The best rule seems to be that when a disability is attributable to injury that is compensable it is not necessary to apportion the disability between the concurring causes"

as justification for ruling out the evidence proffered by the petitioners on the apportionment angle. A eareful reading of this opinion, which we adhere to, shown that the applieant there

> "sustained an injury to his baek whieh aggravated, accentuated, accelerated, and exacerbated a pre-existing arthritie condition in his spine"

both were compensable causes arising out of the same injury, one being the direet effect of the accident and the other being the aggravation of the existing arthritic condition. The Oklahoma cases cited by us in support of this proposition will all show a similar situation. Under such circumstances it would be wholly unnecessary, even foolish, to apportion the percentage of disability arising from eaeh separate cause.

The prineiple stated in the Rhodes ease, supra, however has no application when, as here, one of the *two concurring causes* which produced the total disability was not attributable to the accident and injury for which eompensation was to be granted, *but arose independently out of a disease which was not compensable under the record as it stands in this case.* Any other construction would violate the fundamental prineiple of the compensation law, to-wit; "That compensation is only to be granted when the disability or disease results proximately from the aeeident."

Inasmuch as the findings and award are not supported by the evidence, and the further fact that the referee excluded relevant and material evidence that should have been considered by the Commission, the award is set aside.

LEVI S. UDALL,
Judge Superior Court.

Concurring:
A. G. McALISTER,
Chief Justice
HENRY D. ROSS,
Judge

NOTE: Due to the absence of Judge R. C. Stanford from the State, the Honorable Levi S. Udall, Judge of the Superior Court of Apache County, was called to sit in his stead.

" . . . A NEW MEDICAL ORDER IS INEVITABLE . . . "

Last June Wendel Berge, Assistant Attorney General of the United States and successor to Thurman Arnold as head of the Anti-trust Division, gave a scholarly address before the 14th Annual Meeting of the American Urological Association on "Justice and the Future of Medicine." The thesis of Mr. Berge's speech might be summed up in his statement that "In the advance of the arts of medicine, you have done a brilliant job. In the face of this advance it is all the more tragic that progress in the organization of medicine has lagged—and, because of this lag, the Nation has not had the full benefit of your superlative performance."

He then proceeds to explain what he means by "organization": ". . . as a group, physicians have been little exposed to the discipline of the social sciences, and social organization is as intricate and as full of mysteries as the art of medicine itself. So when I hear a physician speaking about the organization of medicine in a tone of doctrinaire finality, I cannot fail to remark the contrast with the courageous and humble search for truth displayed in his own work."

Of course Mr. Berge refers to the Group Health case. He does not dwell upon it at any length and concludes his remarks with this statement: "With the victory of the Government in the Supreme Court the case is now closed. I advert to it only because it has current significance. It is, to borrow a term from your profession, a symptom of a pathological condition in the organization of medicine. The organization of medicine has not kept up with its technology. The fault is not individual, but institutional. The cleavage is not to be eradicated by invectives, by isolation from modern thought, by clinging stubbornly to that which was once good. It can be resolved only by an escape from folk lore, a probing diagnosis, a conquest of prejudices, a drive at the very heart of the malady."

In a brief survey of trends, he mentions the passing of the family doctor who, he says, has been succeeded by the modern general practitioner. He points to the progress in medicine, particularly in the laboratory. He calls attention to social changes, especally in urban communities. "The standard of living", he says, "has moved to a place of primacy among our everyday concerns. It makes the costs of medical service an inescapable problem. The care of the sick can no longer be absorbed by the family; it becomes an item of expense in the budget. If it is a wage-earner who is ill, there is a double cost; absence from work means loss of earnings and bills are there to be paid. So medical service bcomes a sheer economic necessity, for unless a man's capacity to work is maintained, he ceases to earn. . . .

"And within this urban, industrial, wage-earning society, men and women are becoming increasingly conscious of what they want. Our workers demand health as a condition of their livelihoods. They insist upon adequate medical service at a price they can afford to pay, and in their newly-won self respect they will refuse all charity."

Finally he says, ". . . a changing medicine has not yet been adapted to its new world. The high objectives of the profession endure, for they are eternal. But they must be freshly applied. . .

"In the not so long ago the old-fashioned doctor could be depended upon to administer medicine for the community. He could see to t that needs were met, service was adequate, and costs were justly distributed. The physician of today is in no position to discharge this office. His practice comprehends, not the whole community, but a mere fraction of it. If he is a specialist, the fraction is highly selective. And the whole body of physicians, each operating by himself, has no collective instrument by which it can apportion the totality of service in accordance with general need. . . . The sliding scale survives as a legacy from a simpler society. . . .

". . . . It isn't that on the whole physicians are paid too much; the statistics I have seen lead me to believe that remuneration is quite inadequate. It is rather that there is waste, a failure fully to use facilities, a lack in getting the most out of a trained personnel.

"The result is a national tragedy."

What are the solutions?

Here Mr. Berge says, "The demand is for a vaster, more comprehensive, more reliable medical service. If an instrument of the common health can be provided on terms the people can afford, the people will rejoice. If you do not help them to it, the people will seize upon whatever agencies are at hand as a help in need. For the universal demand that the common health be served can not much longer be stayed."

"A great many physicians are justly fearful that the quality of service be compromised. From the profession I have frequently heard the argument that, when the Government undertakes to look after people's health, the service rendered is in-

variably poor. With this insistence on quality I fully concur. Nor do I dispute the fact that the new venture may provide a service that fails to meet the standards of the profession. But I cannot follow the argument that a casual relation exists between Government auspices and poor medicine. The truth is that a new system brings medical care to hosts of people who before have had no access to it. For them there can be no falling off in quality; there has been no service to fall off in quality. But under a new system the provision of doctors and facilities almost always falls short of the new and enlarged demand. As a result, doctors with exacting notions discover much with which they can find fault.

"But let's be fair and place the blame where it belongs. The shortcomings are not necessarily due to the new system. They are probably due to the shortage of personnel and equipment with which to work. . . ."

It might be called to Mr. Berge's attention that when he speaks of a "demand" for a "more comprehensive, more reliable medical service" there has been no evidence of great enthusiasm on the part of the public for a different system than we now have. The basis for this statement is the experimenting with various types of voluntary sickness insurance plans. They learned early that they had a "selling job" to do and a difficult one. People just were not interested until they had been convinced of the need for protection against the costs of illness. So it can hardly be said that there is a demand. However, in the opinion of progressive physicians, and there are many such, there is genuine need for better distribution of medical care. Most doctors will agree with the argument that a new day in medicine is dawning.

Physicians will take issue with Mr. Berge on the ability of patients to choose their own doctors. "If we are downright honest," he says, "you and I know that the layman possesses neither the facts about the distinctive competence of particular physicians nor trustworthy norms to guide his judgment. In a matter of medicine, I am not foolish enough to trust my own choice—and a check with some of my lawyer colleagues indicates that they agree with me. I have over the years, through the devious ways by which a layman gets a little practical knowledge, discovered a physician or two whose judgment I have reason to trust. And with me it's their choice, not mine, which goes.

"How many patients have walked into your office whose ailments have been aggravated by an amateur's choice of a physician?. . ."

Mr. Berge is here on ground, with which he is apparently not too familiar. There is the undeniable danger of a patient getting into the hands of an incompetent physician. However, the danger is not as great as Mr. Berge implies. The facts are that the modern physician is, on the whole, very well trained. There are, of course, still many medical practitioners who graduated during a period when standards of medical education were much lower than at present but even among them there is a progressiveness which usually assures satisfactory medical service.

Laymen often inquire, "Who is the best specialist (in a certain field) in the city?" The truth is that no one is competent to say, not even the physicians themselves. Doctors are severe judges of each other and are not infrequently biased in their judgment.

Professional training of itself is not the sole criterion of a physician's ability. In fact, scholastically brilliant products of our best medical schools have in some instances been poor doctors. Generally speaking, however, training should be an important factor in selecting a doctor. Of importance, too, is his personality. No matter how well trained the physician may be, if patients do not have confidence in him they will seek someone else. So if a layman takes the trouble to inquire into the education, post-graduate training and other qualifications of a physician, not neglecting to learn at first hand something about his personality, his chances of securing the services of a satisfactory medical practitioner are just about as good as if he takes the advice of medical friends.

It is certainly encouraging to have Mr. Berge say, "Your code of medical ethics has always elevated the relief of suffering above the pursuit of gain." Physicians who recall the statements made during the Group Health case will find this pleasant reading.

Mr. Berge sees no reason for being concerned about the form of organization under which the doctor labors, for he says, "You are right in insisting that high standards of medical care must not be compromised. But standards are a professional matter. Their chief dependence is upon adequacy of resources. They are not inherent in any type of organization. Your current way, as well as state medicine, has its insidious dangers. And, since comparative merits are at issue I am not content with any argument which points out vices in the one without looking at the faults of the other. . . ."

The medical profession will challenge the statement that the type of organization has no bearing on the professional side of medicine. For it has been demonstrated many times both here and abroad that conditions under which doctors work must be satisfactory if they are to do their best work.

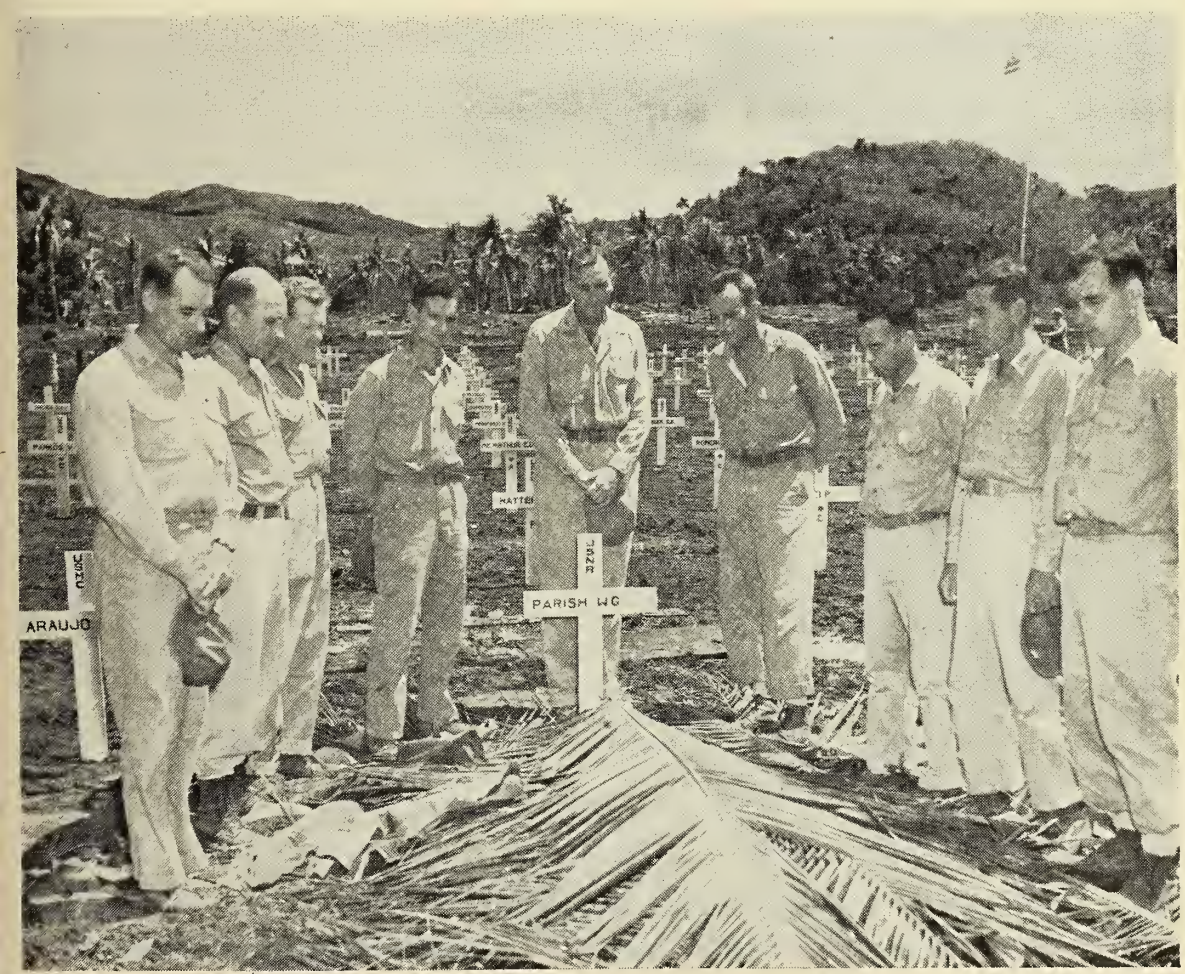
Finally Mr. Berge speaks of the Wagner-Murray-Dingell bill. He says, "The course of events moves fast and to me a new medical order seems inevitable. My fear is not that we will not get it —an awakened public, sparked by our veterans, will see to that. My fear is that we will bring to its creation all the knowledge, wisdom, understanding we possess. A reference to the Wagner-Murray-Dingell bill will make my point. About its intent and objectives there can be for me no dispute. Its detail of provisions, however, may or

may not fall short of its purpose—I do not know. On way and means I am open to argument in behalf of something which is better. In respect to the necessity of distrubuting the cost of protection against ills I am wholly convinced, and I think the American people are adamant.

"The medical order our stalwarts defend has already ceased to exist. If doctors oppose, or stand on the side-lines, the layman will create a medical order which may prove to be indifferent or even blind to the values doctors prize most. If the doctors assume a role in creation, they can see to it that no compromise is made with the standards of the profession."

A majority of the medical profession will not seriously disagree with Mr. Berge's conclusions. Times are changing and will change a great deal more and it is abvious that medicine alone will not remain unaffected. As was stated in the beginning, Mr. Berge's address was an able exposition of his views on medicine and one which most doctors can read with profit. They will not approve of all he has to say, nevertheless they will find themselves in agreement with many of his views.

The address had its humorous moments. At one point Mr. Berge says, "The family doctor—with his bed-side manner, his nostroms, his ponderous vocabulary to conceal his perplexities, his downright devotion to duty and sacrifice of self—was once the very epitome of the art of healing." His reference to the family doctor's ponderous vocabulary is rather amusing because Mr. Berge's address could hardly be classed as light reading. In fact, the doctors who heard him must have been somewhat overcome by his command of language. For example, he comes up with this one, "A long course of cosmic, geologic, biologic events has made of him (Man) the permutation of things which anatomically he is." Later on he puts on the pressure, ". . . I have yet to discover a case



Navy medical officers honor one of their dead. Group of Navy medical officers of the Third Marine Division on Guam gathered at the grave of Lt. W. G. Parish, USN, medical officer killed by Japanese in the attack on the field hospital at dawn July 26th. Dr. Parish, who lived in Cleveland, Ohio, was shot in the stomach and died on board a ship after the hospital was evacuated. The cemetery here is known as Marine Cemetery No. 1, and has in it the bodies of the First Marine and Navy personnel killed on the landing at Asan Beach, Guam. The cemetery is in a rice paddy. The men gathered here were all members of the same medical unit. Left to right they are: Lt. (SG) (MC) Perry C. Spencer, East Lansing, Mich.; Lt. (SG) (MC) Frank B. Webster, USN, of Bellfountain, O.; Pharmacist Thomas J. McGilligan, USN, of Los Angeles, Calif.; Lt. (SG (MC) Marvin Topper, USN, of Chicago, Ill.; Lt. Cdr. Clarence C. Piepergerdes, USN, of Bisbee, Ariz.; Lt. (SG) (MC) Jessie Wimp, USN, of Kirksville, Mo.; Lt. Commander Daniel B. Landau, USN, Hannibal, Mo.; Lt. Cdr. (MC) R. C. Surridge, USN, Los Angeles, Calif.; and Lt. (jg) (MC) Gerald V. Levereault, USN, of Springfield, Mass.

Official P. S. Marine Corps Photo, by Sgt. Heiberger.

in which a bungling physician was allowed to get off with a plea of *caveat emptor.*" It would have been rather interesting to take a poll of the physicians present to ascretain how many of them knew what Mr. Berge meant by "*caveat emptor.*" However, it is not the intention to quibble over such trivialities, for as has already been indicated, the speech was unusually well done whether one fully agrees with it or not.

—Reprinted from THE MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, August, 1944.

ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

Directory

ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892
422 HEARD BUILDING, PHOENIX, ARIZONA

OFFICERS AND COUNCIL

Dan L. Mahoney, M. D. (1948)—Tucson
President

Charles P. Austin, M. D. (1949)—Morenci
President-Elect

Walter Brazie, M. D. (1945)—Kingman
Vice-President

Frank J. Milloy, M. D. (1945)—Phoenix
Secretary

C. E. Yount, M. D. (1945)—Prescott
Treasurer

F. W. Butler, M. D. (1945)—Safford
Speaker of the House

Jesse D. Hamer, M. D. (1946)—Phoenix
Delegate to A.M.A.

D. F. Harbridge, M. D. (1945)—Phoenix
Chairman, Medical Defense

District Councilors

Robert S. Flinn, M. D. (1947)—Phoenix
Central District (Gila, Maricopa, Pinal, Yuma)

George O. Bassett, M. D. (1946)—Prescott
Northern District (Apache, Coconino, Mohave, Navajo, Yavapai)

J. Newton Stratton, M. D. (1945)—Safford
Southern District (Cochise, Greenlee, Graham Pima, Santa Cruz)

Councilors-at-Large

E. Payne Palmer, M. D. (1946)—Phoenix
Hal W. Rice, M. D. (1945) *—Bisbee
O. E. Utzinger, M. D. (1947)—Ray
*Serving unexpired term of W. Paul Holbrook in Service.

COMMITTEES

Scientific

Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.

Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

Scientific Assembly—Charles P. Austin President-elect and Chairman (1945), Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

Scientific Education and Postgraduate Activities—A. H. Dysterheft (1946), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

PRESIDENT'S MESSAGE

Council Meeting. As President of the Association, matters were laid before me needing the attention of the Council, hence a meeting was held at Phoenix on January 7. I would like to explain again, for the information of members of the Association, that all work of the Association is done through the committees and not through the officers as such. Committee members serve for three years each on their respective groups and are being schooled to carry out their programs in full with the Council approving their activities. When I say "being schooled to carry out their programs", I mean that under the new Constitution and By-Laws—and with war intervening to require continuous revision of committees—it has taken time to get going each year.

Matters Before the Council. This being a legislative year, it is natural to anticipate that there will be legislation of interest and concern to the health of the people of the state. The Committee on Legislation—Drs. Jesse D. Hamer, Charles A. Thomas and Walter Brazie, of Phoenix, Tucson and Kingman respectively,—were present and laid their program before the Council. The Council voted the committee full authority to proceed with any and all mat-

Scientific Program

ANNUAL MEETING
April 27-28, 1945, Tucson, Arizona

PIONEER HOTEL — HEADQUARTERS

ROSTER OF SPEAKERS
(Baylor University College of Medicine)

George W. Salmon, M. D.....Assistant Professor Pediatrics
Wilton M. Fisher, M. D.....Assistant Professor Public Health
Paul A. Wheeler, M. D.....Assistant Professor Pathology
Herman W. Johnson, M. D.....Professor and Chairman of Department of Obstetrics
James A. Greene, M. D.....Professor and Chairman of Department of Internal Medicine

Friday Evening, April 27

1. Physical Findings in Heart Disease.....James A. Greene, M. D.
2. Fever in Persons Returned from the Tropics.....Round Table Discussion Drs. Fisher, Wheeler, Johnson, Salmon, and Greene

Saturday Morning, April 28

1. Tropical Diseases in this Area in the Post War Era Wilton M. Fisher, M. D.
2. An Evaluation of Arterial Changes in Gangrene of the Extremities.....Paul A. Wheeler, M. D.
3. Obstetrical.....Herman W. Johnson, M. D.

Saturday Afternoon, April 28

1. Pediatrics.....George W. Salmon, M. D.
2. Clinico-pathological Conference.....Visiting Staff

NOTE: ALVIS E. GREER, M. D., also of the faculty of Baylor University College of Medicine, has been added to the roster of speakers and will present a paper on some phase of FUNGUS DISEASE.

J. WINTHROP PEABODY, M. D., Professor of Diseases of the Respiratory System, Georgetown University School of Medicine, Washington, D. C., has accepted an invitation to address the Scientific Luncheon on some aspect of CHEST DISEASE.

ters arising before the legislature that should command the interest and attention of the medical profession in behalf of the public it serves. Each county will be called on immediately to name one contact man from its membership whom the association committee may reach for legislative purposes. *County Societies: Be on the Alert and Respond When You Receive Communications From This or Other Committees of the Association.*

Public Health Education: The Committee on Public Health Education—Drs. H. L. McMartin, Paul H. Case and Geo. O. Bassett, (Dr. J. S. Gonzalez of Nogales not being able to attend on short notice) — appeared before the Council to receive its approval for radio programs for the current season. The previous program, as approved by the Council, terminated on December 30. The former series of programs were well received by the public over the KOY Network—Phoenix, Tucson and Bisbee outlets. These were transcribed programs, the first series being entitled *"Before the Doctor Comes"*, the second included 13 programs on *"Dodging Contagious Diseases"* while the third and concluding series was on *"Live and Like it."* The Council authorized the Committee to continue educational programs over the radio and approved KTAR for the coming series. The first series to be presented is entitled *"American Medicine Serves the World at War,"* and consists of 10 interview type transcriptions that will be of especial interest to all families. *Watch For Your Notice As To the Date These Programs Will Begin.* Leaflets will be prepared for distribution among your patients informing them of the nature and time of these programs.

Medical Economics. Dr. R. S. Flinn, of the Committee on Medical Economics—the other two members not being able to attend (Drs. Meade Clyne and C. E. Patterson of Tucson) read a progress report from the Blue Cross Hospital Service of Arizona. In brief the report shows that the Blue Cross Hospital Service Plan is catching on in Arizona beyond expectations. Mr. L. Donald Lau, Executive Director, and Mr. M. Lee Astor, Field Representative for the Blue Cross Service, are enthusiastic and have accomplished much in getting the service under way since July. Perhaps the most pertinent item in their progress report, from the standpoint of the medical profession, was the statement that several organizations are ready to subscribe to Blue Cross Hospital Service when they may subscribe to a surgical plan to accompany it. *The Council Authorized the Committee On Medical Economics* to make a full survey and study of existing medical and surgical service plans and report their findings and present their recommendations at the Annual Meeting for the consideration of the Council and House of Delegates. Pamphlets outlining the main provisions of present medical service plans are being ordered and the Committee will provide each member of the Association with this pamphlet, and other pertinent material. *Watch For Your Mailing: Then Give the Committee Your Opinions and Recommendations.*

Your Council consists of 14 members with the counties of *Cochise* (Bisbee), *Graham* (Safford), *Greenlee* (Morenci), *Maricopa* (Phoenix), *Mohave* (Kingman), *Pima* (Tucson), *Pinal* (Ray), and *Yavapai* (Prescott) the points from which members of the Council must come to attend these meetings. It is with pride that we say we had, as usual, a 100% attendance at this called meeting with one exception as one member of the Council had a conflicting meeting to attend during the same hours as he is a member of a State Board which was holding its quarterly meeting on this same date and during the same hours.

Members At Large: It is especially appreciated that members of the various county medical societies, when in Phoenix, either call in person at the Association office or phone and exchange items of interest relative to activities. We just hope this practice is continued and broadened as all committee heads and officers will be pleased to see and hear from any and all of you, either by letter or in person, any time you are nearby. It is such interest that stimulates growth. Thank you.

Dan L. Mahoney

President.

ANNUAL DUES

ANNUAL DUES FOR 1945 ARE NOW DUE AND PAYABLE TO:
THE ARIZONA MEDICAL ASSOCIATION, 422 HEARD BUILDING, PHOENIX

THE AMOUNT OF STATE ASSOCIATION DUES (See: Note below) $30.00 per each active member; $15.00 per each associate member.

EACH COUNTY MEDICAL SOCIETY.... Collects the state association dues from each county member and remits same to the state association as per above.

MEMBERS IN SERVICE..... Are carried on the state roster without payment of dues while in the service provided they were members in good standing at the time they entered service.

MEMBERSRHIP WITH THE AMERICAN MEDICAL ASSOCIATION..... An active member of the state association automatically becomes a member of the American Medical Association without remittance of dues to that organization.

FELLOWSHIP WITH THE AMERICAN MEDICAL ASSOCIATION: A member of the American Medical Association wishing to become a Fellow of the same organization, makes direct application to the American Medical Association and upon acceptance by that organization and the payment of Fellowship dues, direct to the American Medical Association, receives fellowship credentials.

NOTE: An Active Member of the Arizona Medical Association is licensed in the state and engaged in private practice. An Associate Member is one not licensed to practice in the state and is engaged in some branch of the federal service—Indian Service, Veterans' Administration, researchist, teacher, or the like—and not engaged in private practice.

ASSOCIATION RADIO PROGRAMS

Medical Quarter Hour

The Council, at its meeting of January 7, appropriated funds to the *Committee on Public Health Education* for an entire year's series of radio programs.

"American Medicine Serves the World at War"

These programs are now under way and are to be heard—

Each Monday at 6:15 p. m. ✣ KTAR

The present series opened on January 22, the series being entitled: "*American Medicine Serves the World at War.*" These are transcribed interviews obtained from the Bureau of Health Education of the American Medical Association. The following are the programs on the dates they will be heard:

January 22 *"Treatment of War Casualties"*
Rear Admiral Harold W. Smith, M.C., USN

January 29 *"Surgical Advances in Wartime"*
Edw. J. McCormick, M.D., Toledo, Ohio

February 5 *"Health in Hawaii at War"*
Forrest J. Pinkerton, M.D., Honolulu

February 12 *"Public Health Problems in Wartime"*
Warren F. Draper, USPHS, Washington, D. C.

February 19 *"Eye Aches and Eye Fakes"*
Harry S. Gradle, M.D., Chicago, Ill.

February 26 *"Cancer in Childhood"*
Frank L. Rector, M.D., Lansing, Mich.

March 5 *"Training Good Doctors"*
Victor Johnson, M.D., Chicago, Ill.

March 12 *"Protecting Patients and Physicians"*
Austin E. Smith, M.D., Chicago, Ill.

The above series will be followed by one entitled: "*More Health For You*" which discusses, in interview with authorities, diseases of the middle age. During the summer months an important series on "*Keep Cool*" will be heard. Seasonal programs will then continue. Listen to these programs in your community. Call the attention of your patients to the same. Leaflets are under preparation for distribution, from your waiting room table, for your patients, but in the meantime tell them of these programs and invite them to listen and to give you their reaction to them.

Let us hear from you.

Committee on Public Health Education

H. L. McMartin, M.D., Chairman, Phoenix
Geo. O. Bassett, M.D., Member, Prescott
J. S. Gonzalez, M.D., Member, Nogales
Paul H. Case, M.D., Member Phoenix

Staff Meetings

ST. JOSEPH'S HOSPITAL REGULAR STAFF MEETING

November 13, 1944

1. *Myelography*—Presented by Dr. M. S. Dirks.
2. *External Ureteral Ectopia*—Presented by Dr. J. W. Pennington.
3. *Double Kidney with Double Ureters, One Opening to the Outside*—Presented by Dr. C. N. Ploussard.
4. *Case of Lupus Erythema Disseminata*—Presented by Dr. M. Cohen; Discussion by Dr. Robt. Flinn and Dr. Louis Jekel.

December 11, 1944

1. *Penicillin In Ear, Nose and Throat Infections, Sinusitis, etc*—Presented by Dr. W. H. Woern; Discussion by Dr. D. E. Brinkerhoff and Dr. A. E. Cruthirds.
2. *Election of Officers for the Staff of 1945.*

STAFF ELECTED FOR 1945

Chairman.....Dr. James Lytton-Smith
Vice-Chairman.....Dr. Norman A. Ross
Secretary.....Dr. Robert H. Stevens
Executive Committee..Dr. Louis G. Jekel
Dr. E. Henry Running
Dr. L. Clark McVay

MARICOPA COUNTY MEDICAL SOCIETY

Monday Evening, Nov. 6, 1944

Scientific Program

"The Treatment of Syphilis"

1. "The Modern Routine Treatment of Syphilis"—Dr. Louis G. Jekel.
2. "The Rapid Treatment Methods"—Dr. Paul Armour.
3. "The Treatment of Neurosyphilis"—Dr. Louis Saxe.

OFFICERS 1945

President.....John W. Pennington, M. D.
Vice-President.....James Moore, M. D.
Secretary-Treasurer.....Lee Foster, M. D.
Directors.....Louis Jekel, M. D.
Robert Stevens, M. D.
Board of Censors...James Lytton-Smith, M. D.
Library Board.....Ben P. Frissell, M. D.
Blood Bank Rep.....Howell Randolph, M. D.
Delegates.....L. B. Baldwin, M. D.
R. Barfoot, M. D.
P. Case, M. D.
L. Foster, M. D.
B. Frissell, M. D.
J. Lytton-Smith, M. D.
E. H. Running, M. D.
Alternates.....A. Cruthirds, M. D.
H. Franklin, M. D.
G. Irvine, M. D.
H. McKeown, M. D.
J. Moore, M. D.
J. M. Owens, M. D.
R. F. Palmer, M. D.

ST. MONICA'S HOSPITAL

1. Presentation of External Fixation of Fractures by means of the Roger Anderson apparatus—Dr. Matthew Cohen. Discussion by Dr. James Lytton-Smith.
2. Case Presentation of Bronchiectases with autopsy findings—Dr. Frederic Baier.

Officers of the Staff elected for 1945 are as follows:

President.....Dr. Norman Ross
Vice-President.....Dr. Trevor Browne
Secretary.....Dr. Raymond Jennett
Executive Council.....Dr. Henry Running
Dr. Ben Pat Frissell
Dr. J. H. Patterson

GOOD SAMARITAN HOSPITAL STAFF

October 23, 1944

1. Congenital Hare Lip—Dr. J. M. Ovens.

November 27, 1944

2. So-Called Re-formed Gall Bladders—Dr. K. S. Harris; Discussion, Dr. H. J. McKeown, Dr. J. M. Ovens.

Officers of the Staff elected for 1945 are as follows:

President.....Dr. L. B. Baldwin
Vice-President.....Dr. W. H. Woern
Secretary.....Dr. Ben Pat Frissell

ST. MARY'S HOSPITAL, SANATORIUM

Tucson, Arizona

Officers of Staff elected for 1945:

President of Staff.....Dr. J. A. Omer

Vice-President.....Dr. H. S. Faris
Secretary.....Dr. G. O. Hartman

The program of last staff meeting was conducted by Dr. C. A. Thomas, Chairman. Case reports were presented by the following:

Dr. V. M. Gore.....Sarcomatosis
Dr. M. Clyne.....Lymphogranuloma
Dr. R. W. Rudolph.....Splenomegaly

PIMA COUNTY MEDICAL SOCIETY

November 14, 1944

1. Symposium on the Problems of Asthma—Leaders: Dr. Claude Davis, Dr. C. S. Kibler, Dr. S. H. Watson, Dr. R. A. Wilson.

December 12, 1944

A symposium on arthritis will constitute the scientific program as follows:

1. Diagnosis—Illustrated with a movie, Dr. C. E. Bensema.
2. Treatment—Dr. Donald F. Hill.
3. Orthopedic Surgery in Arthritis — Dr. George L. Dixon.

Woman's Auxiliary

STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

PRESIDENT	Mrs. James H. Allen, Prescott
PRESIDENT-ELECT	Mrs. Paul H. Case, Phoenix
FIRST VICE-PRESIDENT	Mrs. W. Claude Davis, Tucson
SECOND VICE-PRESIDENT	Mrs. James R. Moore, Phoenix
RECORDING SECRETARY	Mrs. C. E. Bensema, Tucson
CORRESPONDING SEC'RY	Mrs. Henry A. Hough, Prescott
TREASURER	Mrs. E. Henry Running, Phoenix
DIRECTORS:	Mrs. B. B. Edwards, Tucson
	Mrs. Harlan P. Mills, Phoenix
	Mrs. Edward M. Hayden, Tucson
Cancer Project	Mrs. L. D. Beck, Phoenix
Legislation	Mrs. C. E. Patterson, Tucson
Public Relations	Mrs. George L. Dixon, Tucson
Publicity	Mrs. T. A. Hartgrave, Phoenix
Bulletin	Mrs. L. Clark McVay, Phoenix
Hygeia	Mrs. Joy A. Omer, Tucson
Historian	Mrs. George B. Irvine, Tempe
War Service	Mrs. Jesse D. Hamer, Phoenix

(Mrs. T. A. Hartgraves, State Publicity Chairman)

GREETINGS TO MEMBERS OF THE AUXILIARY

The year 1944 has closed with the accomplishment of many worth while activities. Among these, we would mention especially the work being done in the state by our members for "Cancer Control."

We are proud that the state commander for

OCTOFOLLIN

has been the name employed to designate the brand of

BENZESTROL

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this work is our own state publicity chairman, Mrs. T. A. Hartgraves of Phoenix. The April campaign for funds to carry on this work will be upon us soon. We hope that every Auxiliary member will back this campaign in every possible way.

One of the important reasons for our existence is the first object listed in our handbook. This is: "To interpret the aims of the medical profession to other organizations interested in the promotion of health education."

If we live up to this objective we must give our support to such health programs as Cancer Control, The Blue Cross program and others that may be brought to our attention by the Arizona State Medical Association.

An honor has come to us by the election of Mrs. Jesse D. Hamer as President-elect to our national organization. This office has been given only twice to any western state. To show our appreciation cannot we enlist every doctor's wife to become a member of our auxiliary?

There are many districts where it is not possible to have an auxiliary. In these sections, the wives of doctors may be members at large.

How fine it would be for our Mrs. Hamer, when assuming this national office, to be able to say, "Arizona is behind me one hundred per cent."

There is a possibility that we may have another auxiliary in our state soon. The women of Miami and vicinity are thinking of organizing. We sincerely hope this happens. It will be another report which our national president will be happy to make. We shall be delighted to welcome them.

Important among other objectives, spoken of at our convention in Phoenix, is the promotion of subscriptions to Hygeia and Bulletin. Let us help our state chairmen by taking care of these matters at once so that our reports may be completed before the closing of this year's work.

Our national president, Mrs. David W. Thomas, said in her inaugural address, "An army may be led by an exceptional general but with all his ability and knowledge of military tactics, he would lose every battle if the soldiers did not work in harmony with him."

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accomplish little, but with the wife of every doctor working for the objectives of our auxiliary, we may go far toward winning the battle of health for Arizona.

I hope our reports for the year will show this interest and coordination that Mrs. Thomas has spoken of in her address.

Sincerely,

MARY ALLEN,
State President of
Auxiliary to Arizona
Medical Association.

PUBLICITY REPORT OF THE WOMAN'S AUXILIARY TO THE ARIZONA STATE MEDICAL ASSOCIATION

The Maricopa Auxiliary donated $100.00 toward bringing an exhibit to Phoenix April 9th through 15th. This cancer exhibit is to be open to the public in a further effort to educate the public in cancer control.

A donation of $75.00 was given to the Luke Field Nursery for the care of babies of the wives of servicemen.

The Pima County Auxiliary is presenting an educational program on cancer, on Tuesday, January 9th, at which time the picture "Choose to Live" will be shown and arrangements made for the surgical dressings program for indigent cancer patients.

The Yavapai County Auxiliary is distributing literature in the schools and generally helping to promote the cancer control campaign.

Respectfully, submitted,

MRS. THOMAS A. HARTGRAVES,
Publicity Chairman.

Book Reviews

"CLIMATE MAKES THE MAN", by Clarence A. Mills, M. D., Prof. Experimental Medicine, University of Cincinnati.

Reviewed by H. L. Franklin, M. D., before County Medical Society, October meeting.

Most of Prof. Mills' work has been in Medical Research with emphasis on effects of weather and climate, since 1917.

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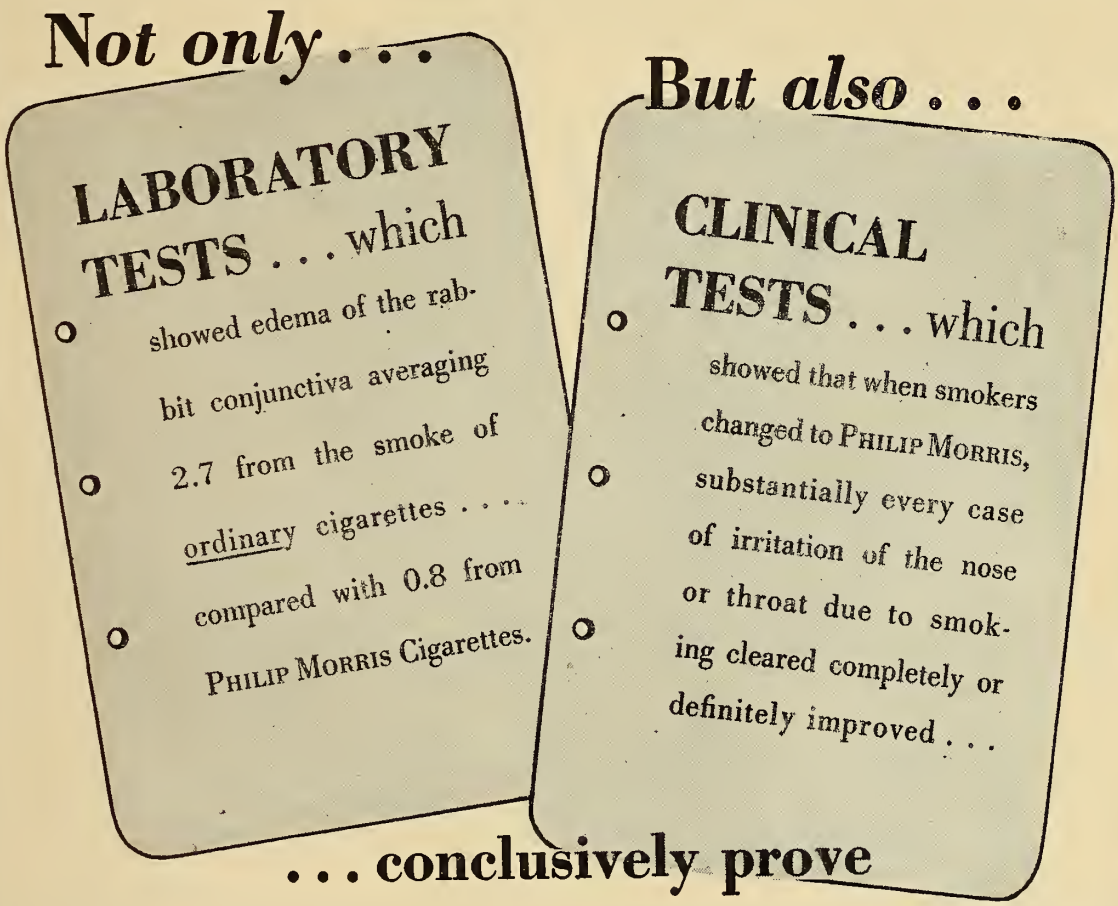
findings help place man in the proper cosmic scheme, for the sun and planets exert an indirect but well-proven effect on all life—through their control of earth temperature and weather.

The speed of the burning of food in man's tissues and intensity of his living depend largely on outside temperatures and easiness of ridding himself of waste heat. These effect man's rate of growth, speed of development, and amount of energy available for thought or action.

Tropic heat produces passive complacency and saps man's vitality, his vegatative existence makes him more susceptible to infectious diseases. Colder climates drive him to restless activity, since natural conditions permit tissue fires to burn more brightly and his energetic life causes frequent breakdowns in body machinery; raising heart failure to leading position. White rats are particularly valuable in studies of climate because of their basic life function's resemblance to human beings. In fairly cool environment rats eliminated waste heat normally, ate greedily, grew rapidly, reaching maturity quickly. Their sexual cycles began early, reaching a high level of reproduction. When shifted to tropical heat, they ate less than ½ their normal amount, growth reduced, matured late and were of low fertility, although mating took place as freely. Conception and healthy offspring were difficult to achieve with a high rate of stillbirth. The same conditions are found in human population in tropical regions. However, these rats in hot climate lived longer than others, provided they were shielded from infections and contagious disease. People die early in tropics from infectious disease and people in cool climate live longest because they are more resistant to infection.

Farm animals in tropics do not mature as rapidly as animals further north due to low vitamin "B" content in grass and their meats show a similar deficiency. Tests show that in order to grow normally, rats living at the 90° F needed twice as much vitamin "B", especially Thiamin, as did cold group. The lack of vitamin "B" is probably common to inhabitants of all tropical countries.

The fallacy of early tropical maturity is proved by findings that show childhood growth



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proceeds most rapidly and sexual functions develop earliest in people who live in coolness of middle-temperate latitudes. The average age occur five months earlier in temperate climates. Some readers may bring up point of high tropical birth rate as compared to rate in temperate zones; but, the high rate is not due to greater reproduction ability, but because of lack of inhibitions allow every trace of fertility to yield results. Temperate zone races could far outbreed those of tropics if they possessed same lack of restraint.

The price of activity as an unconscious response to climatic urge is the greatest health menace to our people. As in contrast to Tropics, where it is quite rare excepting advanced old age, heart failure is leading cause of death followed by other degenerative diseases.

Respiratory infections are attributed to frequent temperature changes and stormy weather; also, that the cancer rate may be influenced by it. Concerning climate and human reproduction, live-birth statistics show greatest number of conceptions occur during period of year when climate is relatively mild, and children conceived at this time are more vigorous physically and mentally.

In the last two or three thousand years there have been several cycles of relatively cool and warm weather.

For the past fifty or sixty years the mean temperature has been rising. Man's present stature has been influenced by these cycles. For the past few hundred years he has increased his length, but it shows, even now, some evidence of decline, in spite of more abundant food supply and vitamins.

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End view of "RAMSES" Diaphragm Rim showing coil spring imbedded in rubber.

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Phoenix, Arizona.

Gentlemen:

Please enter my name on your subscription list and send me the new journal at the above address. Previous to my entering the Service I was associated during 1941 and early 1942 with the Thomas-Davis Clinic in Tucson, then was engaged for the summer months in private and industrial practice at Parker and Poston (War Relocation Center).

I first became aware that there was a journal published in Arizona when I noted a table of contents in the Current Medical Literature section of the J. A. M. A. If possible could you send me the back copies so that I may have a complete file of this journal? Also send me the appropriate bill.

I think every Arizona man who has been stationed in this horrible English climate wishes he could get back to God's country and a decent amount of sunshine for a change. I am Flight Surgeon with one of the most disgustingly healthy bunch of pilots and flying personnel you've ever seen. This unit has received the Presidential citation for its work in the past and has distinguished itself in the major airborne assaults of D-day and since. The only decoration that any of us really care to wear though will be the Victory ribbon which we hope will be awarded in the near future.

Meanwhile, I shall be very happy to be able to read in the new journal a little about what the chaps that are keeping the home fires burning are doing along medical lines.

Yours truly,
—DELBERT W. HESS,
Captain, M. C. AUS.

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Volume 2 *March, 1945* *Number 2*


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1. Am. J. Dis. Child. 66:1 (July) 1943.

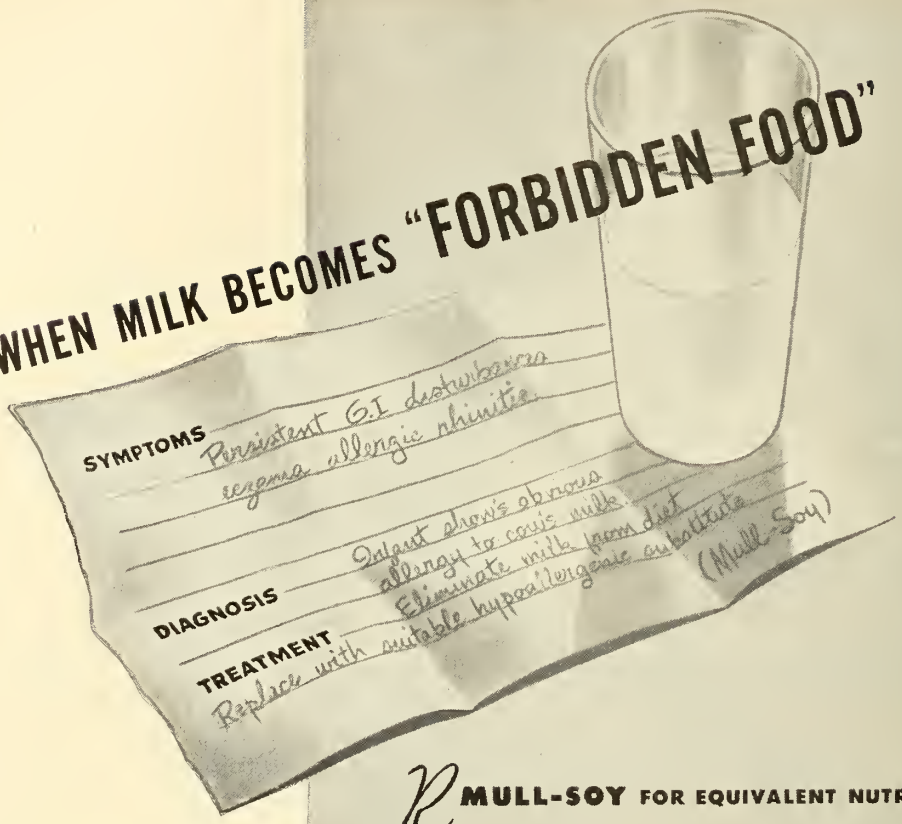
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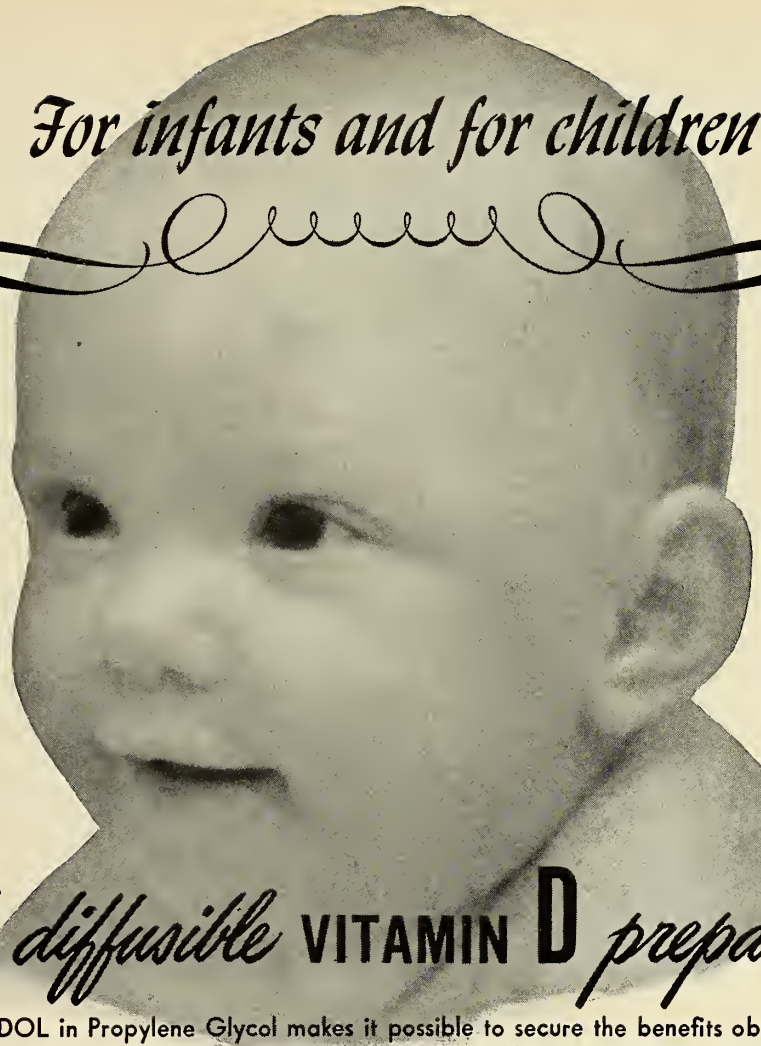
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MULL-SOY is a liquid emulsified food, prepared from water, soy bean flour, soy bean oil, dextrose, sucrose, calcium phosphate, calcium carbonate, salt and soy bean lecithin, homogenized and sterilized. Available in 15½ fl. oz. cans at all drug stores.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

For infants and for children



Milk diffusible VITAMIN D *preparation*

DRISDOL in Propylene Glycol makes it possible to secure the benefits obtainable from combining vitamin D with the daily milk ration. This preparation is simple, convenient and easy to use, and relatively little is required for prophylaxis and treatment of rickets—*only two drops daily.*

DRISDOL IN PROPYLENE GLYCOL
DOES NOT FLOAT ON MILK • DOES NOT ADHERE TO BOTTLE
DOES NOT HAVE A FISHY TASTE • DOES NOT HAVE A FISHY ODOR

Drisdol in Propylene Glycol—10,000 units per Gram—is available in bottles containing 5 cc. and 50 cc. A special dropper delivering 250 U.S.P. vitamin D units per drop is supplied with each bottle.

D R I S D O L

Reg. U. S. Pat. Off. & Canada

I n P R O P Y L E n E G L Y C O L

***Brand* of Crystalline Vitamin D from ergosterol**

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

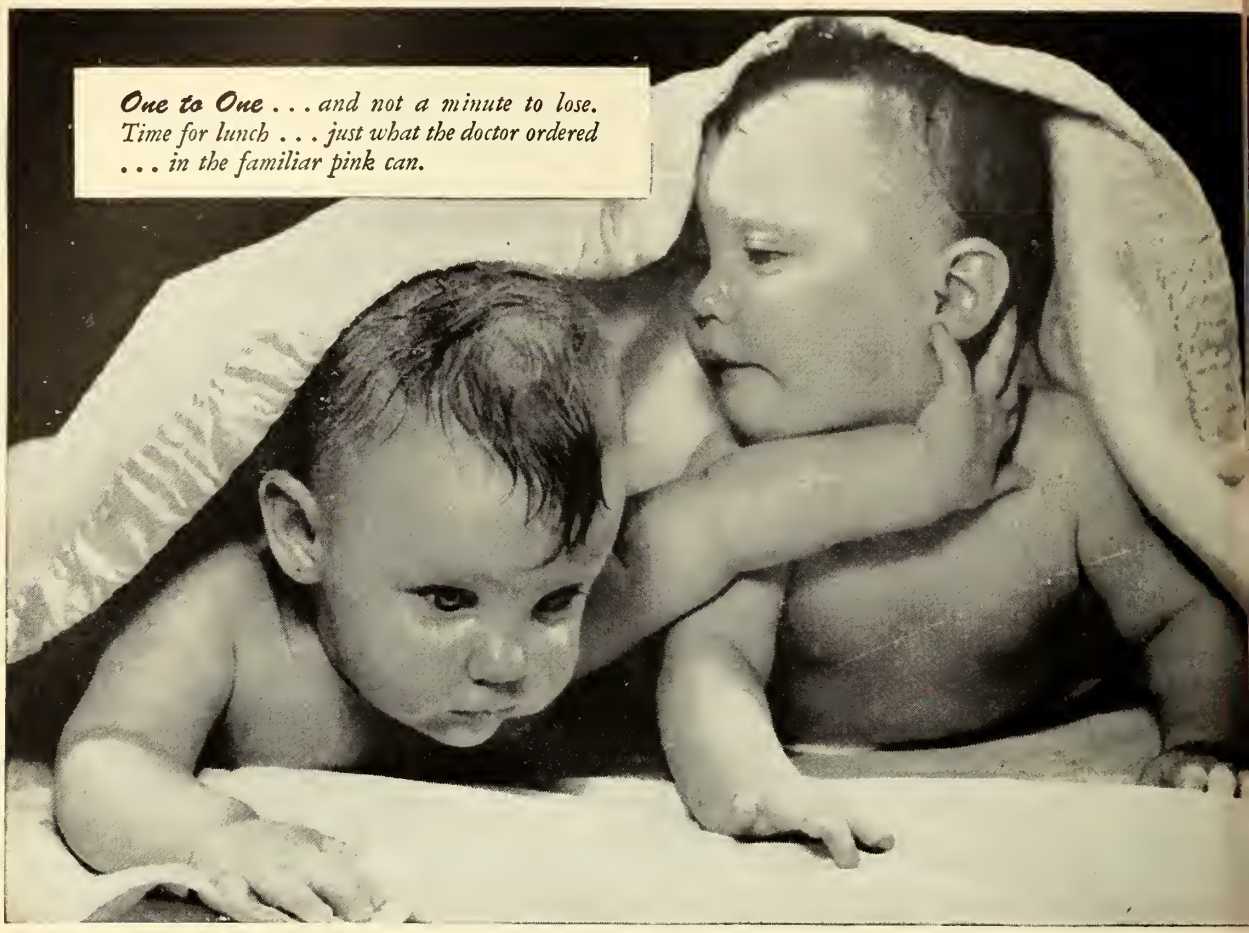
ARMY E NAVY

WINTHROP

WINTHROP CHEMICAL COMPANY, INC.

NEW YORK 13, N. Y. *Pharmaceuticals of merit for the physician* WINDSOR, ONT.

Wyeth



One to One . . .

is the S.M.A. rule: one measure* of S.M.A. Powder to one ounce of warm (previously boiled) water, whatever the quantity desired. It is easy to prepare S.M.A. and it is easy for doctors to tell mothers how to do so.

Because S.M.A. is so closely akin to breast milk babies relish it . . . digest it easily . . . thrive on it. Like breast milk the S.M.A. formula remains constant. Only the quantity need ever be changed. S.M.A. babies are such comfortable babies . . . doctors as well as mothers are grateful for S.M.A.

IT'S EASY TO MIX . . .



S.M.A. is derived from tuberculin-tested cow's milk in which part of the fat is replaced by animal and vegetable fats including biologically assayed cod liver oil; with the addition of milk sugar, vitamins and minerals; altogether forming an antirachitic food. When diluted according to directions, it is *essentially the same as human milk* in percentages of protein, fat, carbohydrates and ash, in chemical constants of the fat and in physical properties.

**One S.M.A. measuring cup enclosed in each 16 oz. can of S.M.A. Powder.*

S. M. A. INFANT FOODS ARE COUNCIL ACCEPTED

Wyeth

S. M. A. DIVISION • WYETH INCORPORATED • PHILADELPHIA 3, P

White's COD LIVER OIL CONCENTRATE

Derived exclusively from cod liver oil
Of controlled potency
Low in cost
Never advertised to the laity
Council-accepted

3 Palatable, Convenient Dosage Forms:

LIQUID—for drop dosage to infants
TABLETS—for youngsters and adults
CAPSULES—for larger dosage

White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

White's PRESCRIPTION vitamins

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

CAMP TRADE MARK Belt for Inguinal Hernia



Belt with pad in place

Camp Spring Pad
(Patented)



Belt fitted, adapted to all types of build

IN patients with indirect inguinal hernia of small or moderate size, this belt with pad has proved successful in many instances in holding the hernia within the abdominal cavity. The comfort of a *belt* about the pelvic girdle is greatly appreciated by the patient.

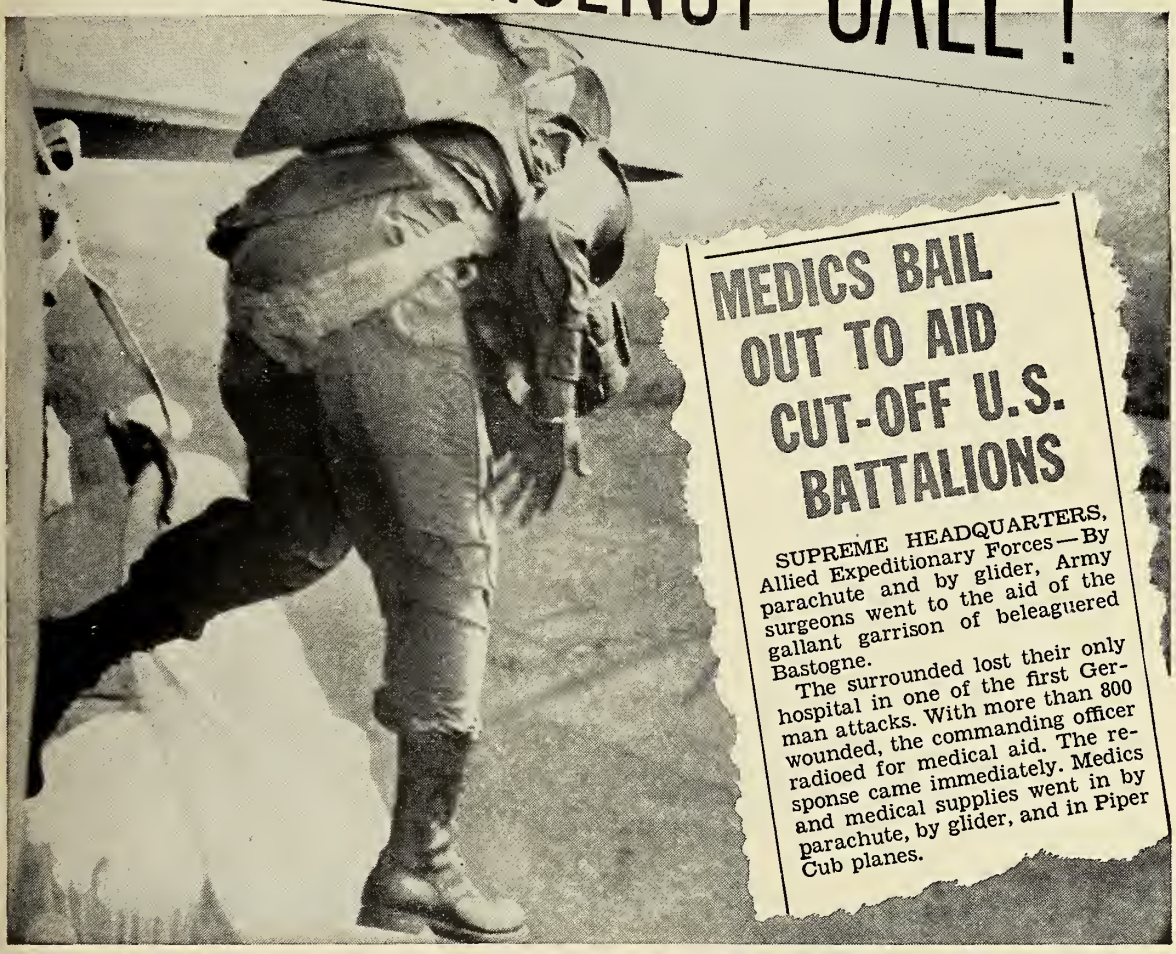
The CAMP adjustable spring pad for use with the belt is equipped with prongs of piano wire. The strong flexible prongs fit firmly in the casings of the belt. Pads are available in varying shapes and depths.

The CAMP adjustment of the belt courses along the groin over the pad, hugging it in and up for the protection of the internal ring.

Surgeons who wish some protection over the area after operation will find this belt of particular advantage because the adjustment allows varying degrees of firmness about the lower abdomen.

S. H. CAMP & COMPANY • JACKSON, MICHIGAN • *World's Largest Manufacturers of Scientific Supports*
Offices in CHICAGO • NEW YORK • WINDSOR, ONTARIO • LONDON, ENGLAND

EMERGENCY CALL!



MEDICS BAIL OUT TO AID CUT-OFF U.S. BATTALIONS

SUPREME HEADQUARTERS, Allied Expeditionary Forces—By parachute and by glider, Army surgeons went to the aid of the gallant garrison of beleaguered Bastogne.

The surrounded lost their only hospital in one of the first German attacks. With more than 800 wounded, the commanding officer radioed for medical aid. The response came immediately. Medics and medical supplies went in by parachute, by glider, and in Piper Cub planes.

FROM Bastogne to Leyte, the story is being repeated over and over again—of Army doctors, braving the battle hazards of the front line, risking *their* lives to *save* lives.

Emergency call? *Every* call is an emergency call to these *heroes in white.*

And with the Army doctor, as with the fighting men they care for, rest is often limited to a few moments of relaxation and a good cigarette. A Camel cigarette, more than likely, for Camels are the favorite with men in all the services, according to actual sales records.

BUY WAR BONDS STAMPS

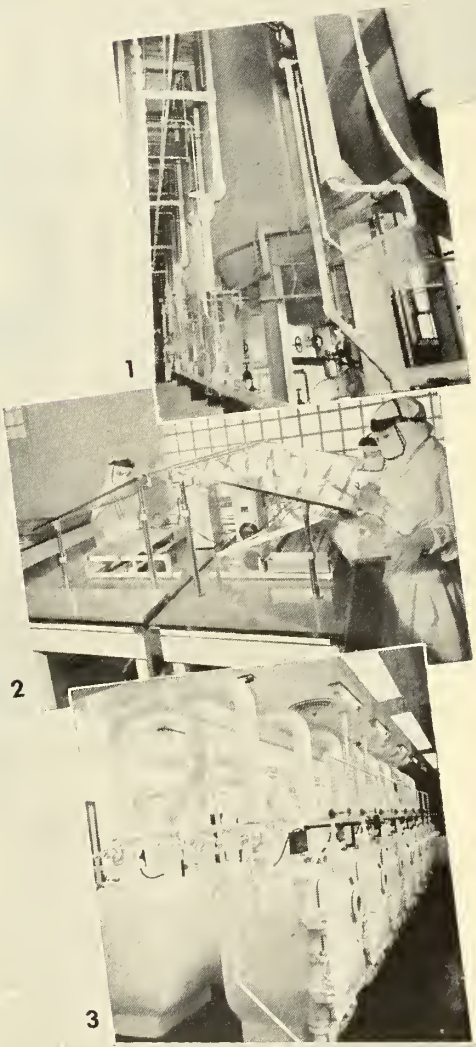


CAMELS

COSTLIER TOBACCOS

R. J. Reynolds Tobacco Co. Winston-Salem, N. C.

These are the Salient Points about



What is its Form?

Penicillin-C.S.C. appears as a thin friable wafer in the bottom of the vial.

How is it Packaged?

Penicillin-C.S.C. is supplied in serum-type, rubber-stoppered, aluminum-sealed vials, containing 100,000 Oxford Units each. C.S.C. originated this mode of packaging for penicillin.

What are its Properties?

Penicillin-C.S.C. is tested and assayed, chemically and biologically, to be of stated potency . . . sterile . . . nontoxic . . . free from fever-inducing pyrogens.

What is its Stability?

Penicillin-C.S.C. now carries an expiration date of 12 months from its date of manufacture. When stored in the refrigerator as directed, it retains its potency and remains sterile, nontoxic, pyrogen-free.

What is its Solubility?

Penicillin-C.S.C. dissolves promptly when physiologic salt solution or distilled water is injected into the vial. Little or no shaking is required to secure uniformity of solution.



1. A battery of the giant tanks in which Penicillin-C.S.C. is produced by "submerged culture."

2. Vial-filling; note the precautions used.

3. Drying Penicillin-C.S.C. under high vacuum.

4. The C.S.C. Research Building. A quarter century of research and experience in microbiotic procedures backs Penicillin-C.S.C.

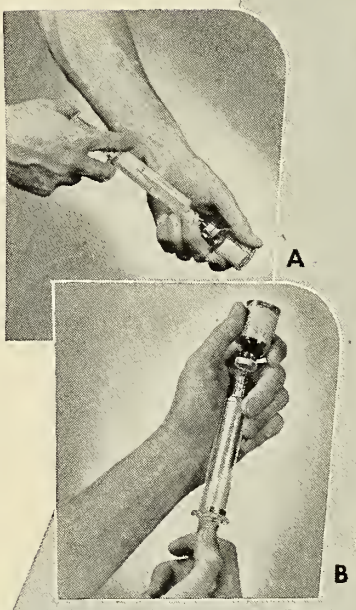
5. The C.S.C. penicillin plant.

PENICILLIN-C.S.C.

THE continually expanding production of Penicillin-C.S.C. now exceeds SEVENTY BILLION Oxford Units per month, providing more than SEVEN HUNDRED THOUSAND individual rubber-stoppered, aluminum-capped, serum-type vials of 100,000 Oxford Units each.

The plant facilities under which Penicillin-C.S.C. is manufactured closely approach the ideal, not only in size but in production methods as well. Much of the equipment and modus operandi used is the direct outgrowth of Commercial Solvents' quarter-century study of the life habits of bacteria and molds.

The control number on each vial of Penicillin-C.S.C. is the physician's assurance of stated potency, sterility, and nontoxicity, including dependable freedom from pyrogens.



A. Remove aluminum tear-off seal, insert needle through rubber stopper, inject 20 cc. of saline.

B. After slight agitation invert vial with needle in situ and withdraw amount of solution (5000 Units per cc.) desired.

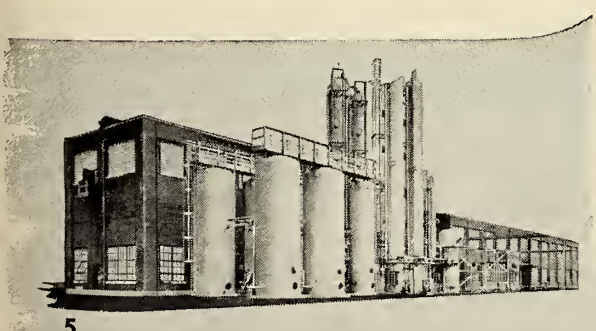
PHARMACEUTICAL DIVISION

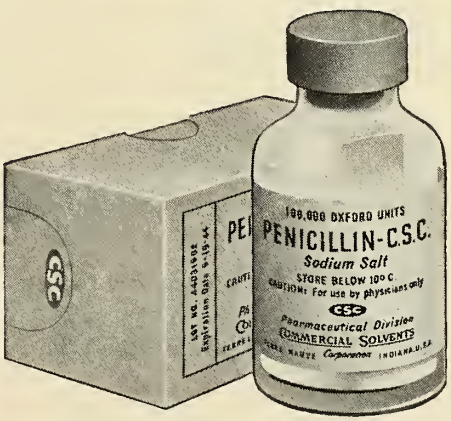
COMMERCIAL SOLVENTS

Corporation

17 East 42nd Street New York 17, N. Y.

CSC





5





'Dexin' does make a difference

COMPOSITION

Dextrins	75%
Maltose	24%
Mineral Ash	0.25%
Moisture	0.75%

Available carbohydrate 99%
115 calories per ounce
6 level packed tablespoonfuls equal 1 ounce
Containers of 12 oz. and 3 lbs.

Literature on request

Proud Daddy is coming home

He is proud of his healthy baby and smart wife. Daddy may not know much about 'Dexin' but he does know that *his* baby does not seem to have the distention, colic and diarrhea that he hears about from other fathers.

And his wife always has plenty of time for herself, her baby and him. She says that 'Dexin' is easy to prepare, being soluble in either hot or cold milk. And that Baby takes it willingly even with other bland supplementary foods, because it is palatable without excess sweetness. 'Dexin' Registered Trademark

'Dexin'

HIGH DEXTRIN CARBOHYDRATE

BURROUGHS WELLCOME & CO. (U. S. A.) INC., 9-11 E. 41st St., New York 17

FEWER nocturnal insulin reactions



When diabetics use 'Wellcome' Globin Insulin with Zinc, nocturnal hypoglycemic reactions are minimized. The action of Globin Insulin is greatest during the first fifteen hours and gradually diminishes thereafter.

For the patient, this means that maximum insulin activity occurs during the hours of food ingestion and greatest carbohydrate metabolism. By the time insulin requirements are lessened, as in leisure evening hours and sleep, the activity of Globin Insulin ordinarily diminishes sufficiently to avoid reactions.

'Wellcome' Globin Insulin with Zinc is intermediate in action between quick-acting short-lived regular insulin and slow-acting long-lived protamine zinc insulin. It is a clear solution, and in its freedom from allergenic properties, is comparable to regular insulin. It is accepted by the Council on Pharmacy and Chemistry, American Medical Association, and was developed in the Wellcome Research Laboratories, Tuckhoe, New York. U. S. Patent No. 2,161,198. Available in vials of 10 cc., 80 units in 1 cc. 'Wellcome' Trademark Registered

ACCEPTED AMERICAN MEDICAL ASSN. Council on Pharmacy and Chemistry



Literature on request

BURROUGHS WELLCOME & CO. (U. S. A.) INC. 9-11 East 41st Street, New York 17, N. Y.

Dietary Protein after Surgery and Other Trauma

apparently must be maintained at a level above normal in order to assure proper wound healing* and at least average resistance against infection.** The feeding of meat, therefore, in adequate amounts, as soon as it can be instituted, appears doubly advantageous: the protein content of meat is high and of highest biologic value; the human digestive tract appears well adapted for handling meat protein.**

*" . . . in a variety of medical and surgical conditions there may occur a considerable depletion of body protein owing to a combination of factors, of which the two most important are a generally diminished protein intake and an enhanced protein catabolism. This situation inhibits wound healing, renders the liver more liable to toxic damage, impedes the regeneration of hemoglobin, prevents the resumption of normal gastrointestinal activity and delays the full return of muscular strength. It is obvious that to meet the situation an adequate supply of proteins and calories must be made available to the body. . . . This implies at least 150 Gm. of protein and 3500 calories, with as much as 500 Gm. of protein daily when trauma has been severe, as in serious burns." (HOFF, H. E.: Physiology, New England J. of Med. 231:492 [Oct. 5] 1944.)

**"Cannon . . . cites the evidence which indicates that diminished protein intake lowers resistance to infectious disease, and corroborates it by his own experiments . . . it seems probable that the small intestine is better adapted for handling protein (especially meat protein) than for other types of food. . . . it is especially well supplied with enzymes which attack protein, and the digestion of meat has been shown to be more complete than that of foods of vegetable origins." (CRANDALL, L. A., Jr.: The Clinical Significance of the Plasma Proteins, Memphis M.J. XIX:147 [Oct.] 1944.)

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods and Nutrition

AMERICAN MEAT INSTITUTE

MAIN OFFICE, CHICAGO . . . MEMBERS THROUGHOUT THE UNITED STATES



MEDICAL ADVICE is sought and followed on most problems of health, but a man's diet—however irrational—is sacred! Thus, improper eating habits may be difficult to alter, especially where adults are concerned. Moreover, selection or preparation of an adequate diet requires skill as well as wisdom,[1] since the nutritional value of a natural, unstandardized foodstuff depends largely upon the conditions under which it is produced and prepared.[2] As a result, dietary inadequacy is widespread[3] and vitamin B-complex deficiencies constitute the most serious feature of the problem.[4]

Administration of a standardized preparation such as ELIXIR 'B-G-PHOS' assures an adequate intake of the essential factors of the B-complex.

ELIXIR 'B-G-PHOS' provides the essential elements of vitamin B-complex—Thiamine (vitamin B_1), riboflavin (vitamin B_2 or G), and niacinamide—together with the glycerophosphates of calcium, manganese, sodium and potassium.

ELIXIR 'B-G-PHOS' will be found to be an exceptionally palatable preparation. It stimulates a healthy appetite, aids assimilation by increasing absorption and the flow of gastric juices, and tends to accelerate the activity of gastric ferments.

Supplied in both pint and gallon bottles.
Sharp & Dohme, Philadelphia 1, Pa.

1. Science, *97*:385, 1943. 2. J. A. M. A. *119*:945, *120*:831, 1943; Digest of Treatment, *6*:835, 1943; New England J. Med. *228*:8, 1943. 3. New England J. Med. *228*:118, 1943. 4. South. Med. J. *34*:89, 1941.

Elixir **"B·G·PHOS"**



The Latest Spirochaeticide

acceptable to the United States Public Health Service for the new rapid treatment of syphilis (August 31, 1944) is Dichlorophenarsine Hydrochloride, U. S. P. This newest anti-luetic is made available by E. R. Squibb & Sons as

Clorarsen
TRADEMARK

For detailed information, please address Professional Service Dept.: E. R. Squibb & Sons, 745 Fifth Ave., New York 22, N.Y.

SQUIBB

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

UNITED DRUG COMPANY and YOUR REXALL DRUGGIST

YOUR PARTNERS IN HEALTH SERVICE



U. D. products are available wherever you see this sign

PURETEST PLENAMINS

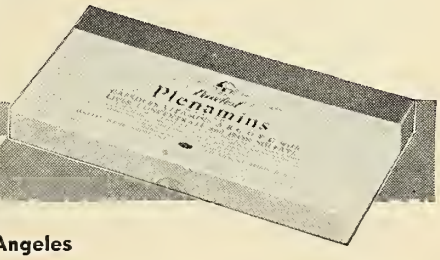
SUPPLEMENT THE DIET WITH ESSENTIAL VITAMINS

Puretest Plenamins—A, D, B_1, C, E, G (B_2), B_6, Niacinamide, Calcium Pantothenate with Liver Concentrate and Iron Sulfate—are tested, checked and rechecked in the United Drug Company's Department of Research and Control, one of America's finest and most modern pharmaceutical laboratories.

Puretest Plenamins are economically packaged in amber and black capsules and are available in quantities of 72, 144 and 288 to the box. One amber and one black capsule supply the following essential vitamins:

Vitamin A.....5,000 U.S.P. Units
Vitamin D.....1,000 U.S.P. Units
Vitamin B_1.....666 U.S.P. Units
Vitamin C.....50 mg., 1,000 U.S.P. Units
Vitamin E.....Alpha Tocopherol, 1 mg.
Vitamin G (B_2).....2 milligrams
Vitamin B_6.....50 micrograms
Niacinamide.....20 milligrams
Calcium Pantothenate.....1 milligram
Liver Concentrate (1:20).....2 grains
Ferrous Sulfate.....1 grain

Puretest and U. D. products are obtainable only at Rexall Drug Stores where competent pharmacists carefully fill your prescriptions. For quality, convenience and economy in drug service and supplies, you can depend on your neighborhood druggist displaying the Rexall sign.

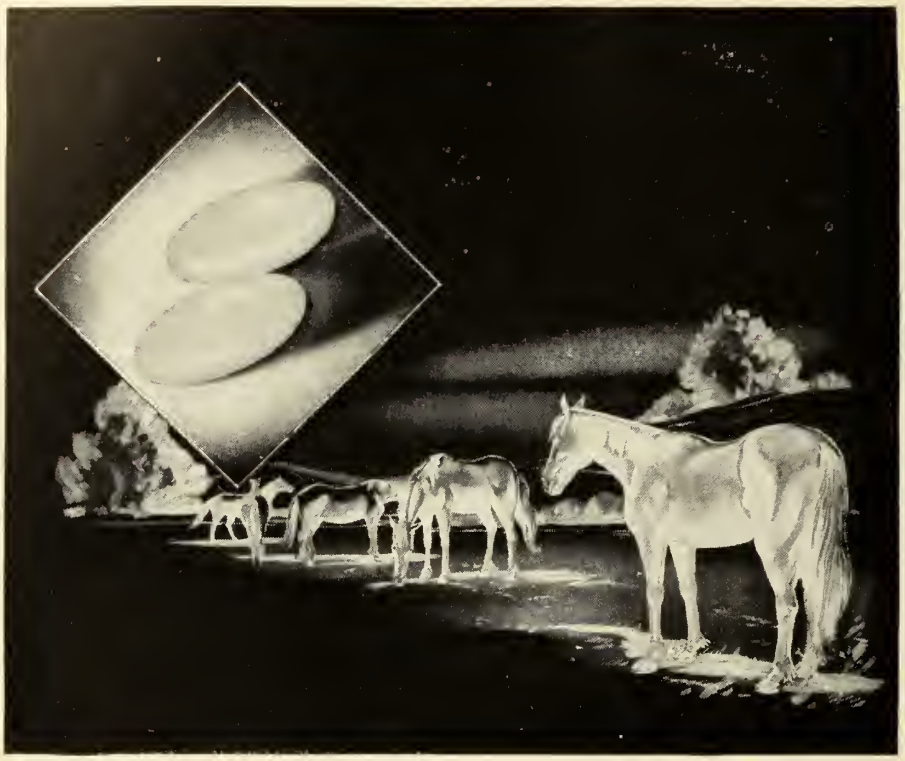


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Boston • St. Louis • Chicago • Atlanta • San Francisco • Los Angeles
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PHARMACEUTICAL CHEMISTS • MAKERS OF TESTED-QUALITY PRODUCTS FOR MORE THAN 42 YEARS

NO. 3 OF A SERIES..."PREMARIN" THERAPY AT THE MENOPAUSE



Naturally Occurring

"Premarin", although one of the most potent oral estrogens, is derived exclusively from natural sources. The published reports of many outstanding clinicians indicate that in "Premarin" the physician will find the desirable characteristics of both the natural and synthetic estrogens. Even though "Premarin" is highly potent, unpleasant side effects are seldom noted. In fact, most workers have commented on the feeling of well-being reported by the patient on "Premarin" therapy.

Now available in 2 potencies
No. 866: Bottles of 20, 100, 1000
No. 867 (Half-Strength): Bottles of 100, 1000

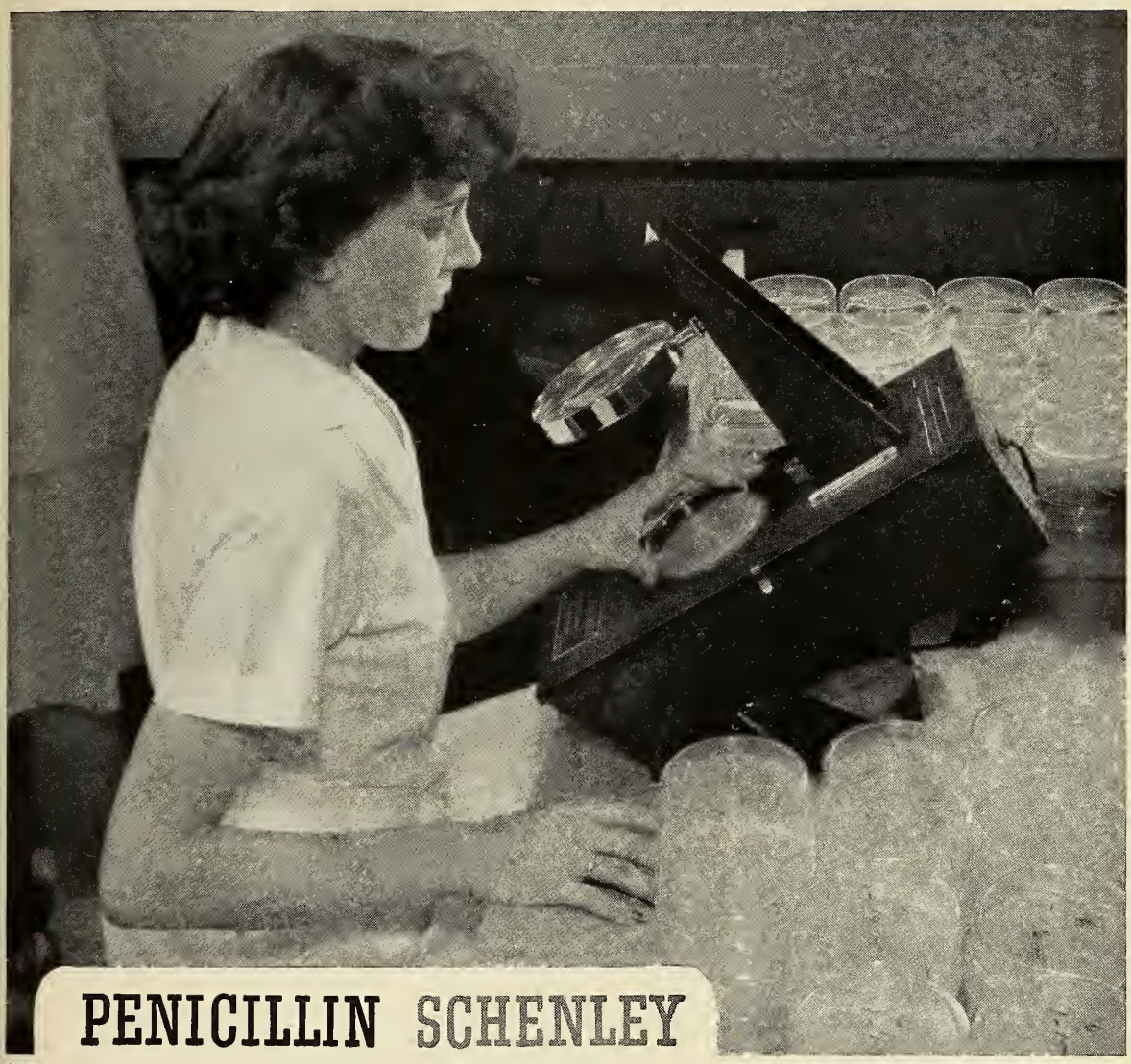
HIGHLY POTENT
ORALLY ACTIVE
WATER SOLUBLE
ESSENTIALLY SAFE
WELL TOLERATED
IMPARTS A FEELING OF WELL-BEING

"Premarin"
Reg. U.S. Pat. Off.



CONJUGATED ESTROGENS (equine)

AYERST, McKENNA & HARRISON LIMITED...Rouses Point, N.Y., New York 16, N.Y., Montreal, Canada
(U.S. Executive Offices)



— the drug that gives new meaning to the word "control"

The penicillin which first attracted the attention of Alexander Fleming was an "occurrence of nature", with no control exercised over the conditions of its production. Production of pyrogen-free penicillin for the medical profession, however, is accomplished only by the most elaborate methods of control for insuring highest attainable productivity, potency, and purity.

Shown here is one of the many rigid controls exercised at the Schenley Laboratories. In this step, PENICILLIN Schenley is being tested to insure standard potency. As supplies of penicillin increase, the elaborate system of control will continue to safeguard its production at Schenley Laboratories.



SCHENLEY LABORATORIES, INC.

Producers of PENICILLIN SCHENLEY • Executive Offices: 350 Fifth Avenue, N. Y. C.

Wyeth
REG. U. S. PAT. OFF.

Special Foods

FOR INFANT NUTRITION



SMACO

PROTEIN S.M.A.*
(ACIDULATED)

An acidulated, easily digested high protein formula for all infants requiring a high protein intake

Protein S.M.A. Acidulated is a valuable aid in the management of premature and undernourished newborn infants, in cases of marasmus and malnutrition, in cases of diarrhea . . . This food has an easily digested curd and a liberal vitamin content . . . To increase the caloric value add Alerdex as the carbohydrate . . . As the infant recovers and weight reaches normal, it is well to begin feeding standard S.M.A.

Powder: 8-ounce tins

HYPO-ALLERGIC*
WHOLE MILK

For infants and children showing an allergenic reaction to proteins in cow's milk

Hypo-Allergic Milk is cow's milk rendered less allergenic by means of prolonged thermal processing which changes the character of the protein molecule . . . When liquefied it may take the place of whole cow's milk in any infant formula; in the same proportions, ounce for ounce . . . It may be used as a beverage and to replace milk in cooking for allergic adults, as well as children.

Powder: 1-pound tins
Liquid: 15½-ounce tins

ALERDEX*
Protein-Free Maltose and Dextrins

A carbohydrate for routine use in all milk formulae

Alerdex, a protein-free carbohydrate, is especially valuable in the preparation of formulae for the protein-sensitive infant . . . It is the ideal carbohydrate for the physician's favorite formula . . . Alerdex is prepared from non-cereal starch by a process which tends to hydrolyze completely all traces of protein . . . It is a valuable adjunct to special diets with Hypo-Allergic Milk and Protein S.M.A. Acidulated.

Calories: 27½ per tablespoonful.

Powder: 16-ounce tins

*REG. U. S. PAT. OFF.

ACCEPTED AMERICAN MEDICAL ASSN Council on Foods and Nutrition

AT PHARMACIES ONLY

THESE ARE SMACO PRODUCTS FROM THE S.M.A. DIVISION

WYETH INCORPORATED • PHILADELPHIA 3 • PA.



Without Fear *at Forty-Five*



She, and millions like her, are today spared the physical and emotional disturbances usually suffered by women during the menopause. Through the use of Progynon* her physician is making it possible for her to negotiate the middle years of life gradually . . . and gracefully.

Progynon therapy in the menopausal syndrome consists of intramuscular injections of Progynon-B* until symptoms are controlled. Therapy may often be maintained with Progynon-DH* Tablets.

*Trade-Marks Reg. U. S. Pat. Off.

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SCHERING CORPORATION BLOOMFIELD, NEW JERSEY

Wyeth

Precision

PHARMACEUTICALS

for

MODERN THERAPIES

Wyeth offers a complete line of pharmaceutical, biological and nutritional products developed to meet the most exacting requirements. The uniformity of Wyeth preparations is the result of long years of manufacturing experience; their quality, the result of laboratory skill and the finest of material.

WYETH INCORPORATED
PHILADELPHIA 3, PA.

Wyeth
REG. U. S. PAT. OFF.

A Complete Service for the Physician
PHARMACEUTICALS • NUTRITIONALS
BIOLOGICALS

WHERE OLD FRIENDS HOLD REUNION—





★

Old friends of yours—products which you use day after day—fill the shelves of our Jobbed Drug Section from floor to ceiling. Such well known labels as Cutter Laboratories, J. T. Baker Chemical Company, Parke-Davis, Mallinckrodt, John Wyeth, Winthrop, Eli Lilly, E. R. Squibb, Abbott, Fritzsche Bros., Sharp & Dohme, Merck, Ciba, Upjohn and others appear on these shelves. Every type of product is included—chemicals, biologicals, ampoules, stains and reagents, volatile oils, drug room supplies, general pharmaceuticals and ethical pharmaceutical specialties.

This big stock is one of the many reasons why we are able to give you an outstanding drug service—24-hour delivery on practically every order.

While it is impossible to list all of the stocked items, a partial listing can be found in your copy of the P & H catalog. For fast, thorough service be sure to use this catalog as your drug buying guide.

PHYSICIANS and HOSPITALS SUPPLY CO. Inc.
MINNEAPOLIS, MINNESOTA



Compatible companion for soap

A surface injury contaminated by dirt, or an unbroken skin in which an incision is to be made, requires a good scrubbing with soap and water before the application of a potent antiseptic. 'Merthiolate' (Sodium Ethyl Mercuri Thiosalicylate, Lilly) retains its bactericidal properties in the presence of soap, has prompt, well-sustained germicidal effect, and is compatible with tissue and body fluids.

ELI LILLY AND COMPANY
Indianapolis 6, Indiana, U.S.A.

Lilly

GANGLIONEUROMA OF THE MEDIASTINUM

HOWELL RANDOLPH, M. D.
Phoenix, Arizona

NERVE tumors involving the root ganglia of the dorsal segments of the spinal column or the intercostal nerve trunks, are occasionally seen and are chiefly of interest because they are amenable to surgical removal. Kent et al have given a comprehensive review, assembling 74 Mediastinal tumor cases from literature and adding 18 cases from Barnes Hospital. In addition there were 27 chest wall tumors listed. A considerable number of these tumors have been successfully removed, even as far back as 1870. There has grown a general impression that they are always benign, but as pointed out by Kent some have been found to show microscopically, malignant characteristics and a few of them have developed metastases. Others have shown rather rapid growth and have been inoperable as a result of invasion of the vital structures of the mediastinum. In a few cases ganglioneuroma growth extended into the spinal column, (so-called hourglass tumor) and have produced pressure symptoms which were relieved by laminectomy and removal of the spinal tumor.

The clinical characteristics of these tumors indicate that they are usually of slow development and may exist for several years without discovery. The earliest symptoms may be the result of vasomotor disturbances, later, pressure symptoms, involving the region to which adjacent nerves may be distributed. Pain is not a prominent symptom until size of the tumor is sufficient to cause pressure. Shortness of breath, heaviness in the chest, pain radiating into the shoulder or neck, flushing of the face, are occasionally observed. Certain reported cases show tumors weighing several pounds before the symptoms produced lead to their discovery. The prognosis after diagnosis is poor if not operable, in other words, if symptoms have developed to a point indicating involvement of vital structures. The tumors are usually resectable because of the fact that they stem from the ganglion or nerve trunk and develope on a pedicle with cystic encapsulation. The capsule may be readily stripped from the surrounding tissue without leaving residual tumor elements. Recurrences are rare but a predisposition to nerve tumor development may be present, and the same type of tumor has been found in other parts of the body.

Pathologically there are varying degrees of ganglionic elements scattered throughout the stroma of neurofibromatous tissue growth. The character and number of the ganglion cells are indices as to possible malignancy.

Surgical treatment is the only method of value in dealing with these tumors. Out of 126 cases of all types of mediastinal and chest wall tumors, there were 34 deaths, 18 who died following operation and 16 were discovered at autopsy or were considered inoperable. Surgical approach depends upon location of the lesion, as about 85% are located in the posterior mediastinum. Section of the ribs adjacent to the tumor, near the costal angle gives adequate exposure for smaller tumors, and has the advantage over resection of the rib in making better repair of the chest wall.

REPORT OF A CASE

Patient H. J., age 21 came for examination September 18, 1944, complaining of feeling of shortness of breath following a fright from a near miss of his truck by a lightning flash. He had been perfectly well, but about eighteen months before first seen he was rejected by the Army for "scar tissue" on the lungs. Since then he has worked at hard work driving for a delivery service handling 500 crates of eggs daily. He has been rather nervous and states that he is easily upset and emotional, has no appetite for breakfast, and has had occasional headache behind the right eye during the past 2 years.

Present Illness

After the onset of the shortness of breath the patient continued to work the next three days but he states he noticed there was a choking sensation and a tightness in the upper right chest on deep inspiration. There was some sharp pain, not severe, in the chest, none in the arm.

Family History

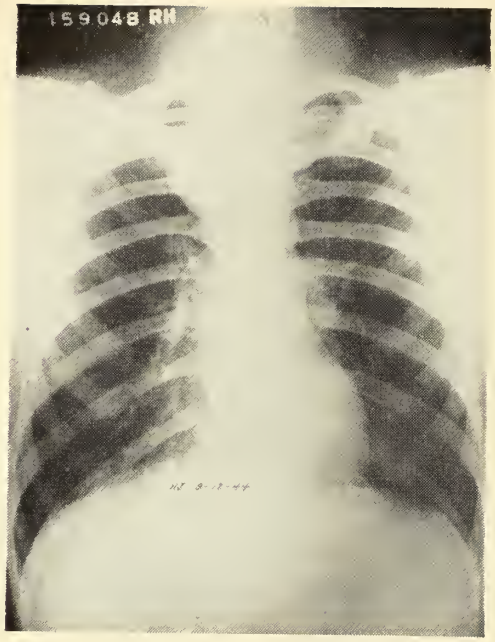
The patient's father has an arrested tuberculosis, no co-residence of active tuberculosis for many years. His mother is well, one sister well, one grandfather died of cancer.

Past History

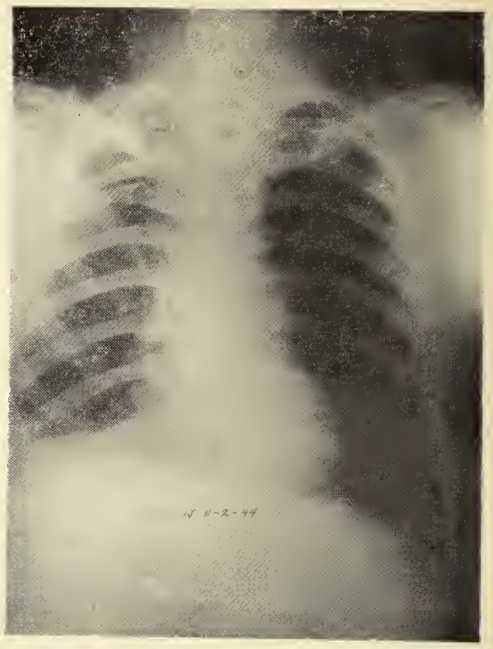
Pneumonia 1939. Appendectomy.

Physical Examination

Temperature 99.2. Pulse 82. Height 71 inches. Weight 166 pounds.



A. Before removal.



B. After removal.

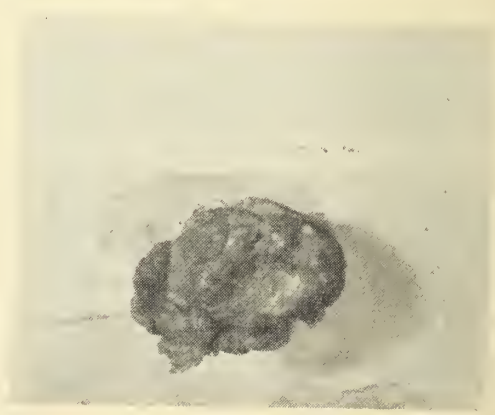
Excellent general condition, well muscled and tanned. Slight halitosis. Teeth good. Large cryptic tonsils. Heart sounds clear. Blood pressure 130/70. Abdomen negative. Extremities negative. There was a loud lub-dub just above the clavicle on the right side, no murmur. Indirect larngeal examination show chords normal.

Fluoroscopic examination demonstrated clearly that the tumor was located in the posterior mediastinum.

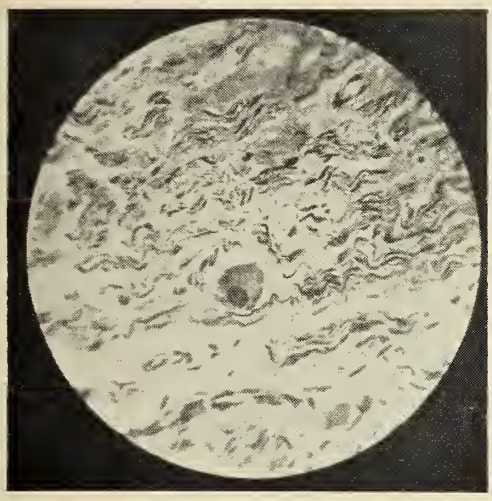
Operation

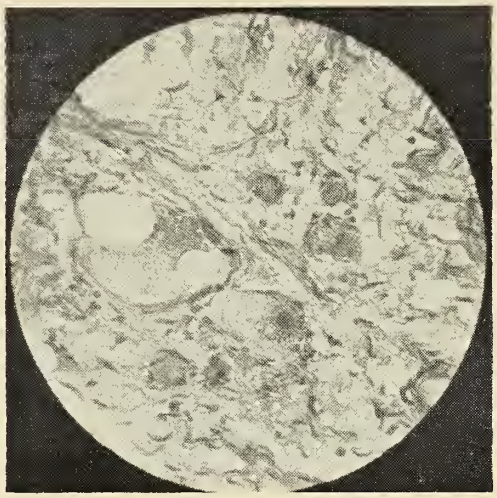
Under intra-tracheal nitrous oxide ether anesthesia a seven-inch paravertebral incision was made from the level of the second rib through the muscles, exposing the rib cage. The third, fourth, and fifth ribs were stripped of periosteum, sectioned near the angle and retracted. These ribs were not excised. The tumor was found lying in the costo-vertebral gutter and was removed by blunt and sharp dissection with considerable difficulty. The capsule was stripped from the overlying pleura and an attempt was made to perform the enucleation extrapleurally. Dense adhesions between capsule and pleura made this impossible, therefore a sharp incision was made into the pleura allowing the lung to collapse adjacent to the tumor, this allowed adequate exposure and the tumor was freed. It extended from the upper margin of the third rib to the lower margin of the sixth rib. A moderate amount of bleeding was encountered. The blood supply was from the fifth intercostal, which was transfixed and ligated. The pleura was sutured tightly with the anesthetic pressure increased to completely re-expand the lung and the muscles were repaired in two layers, no drain.





After fixation in formalin





Pathologists Report
(Dr. Maurice Rosenthal)

Gross: The tumor was a roughly oval-shaped mass, presenting a thin capsule and measuring 7.5x5x3 cm. One surface was rough, fibrous, and nodular in appearance. The other surface was smooth and light yellowish-gray in color. The cut surface presented a smooth, glassy, edematous, myxomatous appearance which was light yellowish-gray in color. The gross architecture presented an irregular lattice network. There were no cysts nor hemorrhages present.

Microscopic: The section reveals a loose, edematous, fibrillar stroma in which a moderate number of large ganglion cells are seen. Many of these cells are binuclear or polymorphonuclear. Degenerative changes in the cytoplasm are seen. A few of them contain a dark brown pigment. Some of the cells present multiple processes and show an enveloping capsule. The fibrous components of the tumor include myelinated and unmyelinated nerve fibers. Many of the cells are small and round but present the histological characteristics of nerve cells. No immature undifferentiated cells or other evidence of malignant transformation is noted.

Diagnosis: Ganglioneuroma, benign.

Course in the Hospital:

Immediate post-operative condition very good. Pulse went to 130 second day, temperature 101 for two days. Attempted aspiration of fluid resulted in withdrawal of only 5 cc. of slightly bloody fluid. Patient was discharged from the hospital on the sixteenth day. He returned to light work in one month.

Summary

A case of mediastinal ganglioneuroma is reported with operative removal and recovery.

15 E. Monroe

Symposium on the Treatment of Syphilis*

"THE MODERN ROUTINE TREATMENT OF SYPHILIS"

LOUIS G. JEKEL, M. D.
Phoenix, Arizona

TREATMENT ROUTINE FOR UNCOMPLICATED LATENT SYPHILIS

THE schedules outlined herein for the routine treatment of uncomplicated latent syphilis are practically, if not exactly, the same as those recommended by the Co-operative Clinical Group and the United States Public Health Service. These schedules have greatly reduced the total amount of treatment from that which it was formerly customary to give. This reduction in the total amount of treatment is the most important point to be offered by this paper.

The drugs and dosages used in this program are as follows:

1. Mapharsen—intravenously
 (a) Body Weight—
 120 lbs. or less.....0.04 gm.
 (b) Body weight—
 120 lbs. to 180 lbs.....0.06 gm.

* Presented before the Maricopa County Medical Society, Nov. 6, 1944.

(c) Body weight—
180 lbs. or more.....0.08 gm.
(d) For children—
1.0 mgm. per Kg. body weight.

2. Neoarsphenamine—intravenously
(a) Body weight—
120 lbs. or less.....0.45 gm.
(b) Body weight—
120 lbs. to 180 lbs.....0.60 gm.
(c) Body weight—
180 lbs. or more.....0.90 gm.

3. Bismuth subsalicylate—intramuscularly
(a) Average weights.....0.2 gm.
(1.5 cc. of 0.13 gm. per cc.)
(b) Proportionately more or less for larger or smaller patients.
(c) For children, 2.0 to 4.0 mgm. per Kg. body weight.

4. Sulpharsphenamine—intramuscularly
(a) 5.0 to 10.0 mgm. per Kg. body weight first dose.
(b) 25 mgm. per Kg. body weight thereafter.

VERY EARLY SYPHILIS

System I is used for primary (sero-negative or sero-positive) and secondary syphilis and early latent syphilis of less than two years duration if uncomplicated and untreated. Dark-field examinations are done on all genital lesions at the time of the physical examination. At least two persons must agree that a dark-field examination is positive before treatment is instituted on this basis alone, and a note with the observers' names is to be entered on the patient's chart. The diagnosis of untreated syphilis must not be made without adequate laboratory confirmation.

The patient is seen twice each week. At one of these visits he receives mapharsen alone; at the other he receives both mapharsen and bismuth. This course extends through twenty weeks so that the patient receives forty injections of mapharsen and twenty of bismuth. When this course of treatment is completed the spinal fluid should be examined. If it is negative the patient is probated and advised to return in six months for a check-up, including another spinal fluid examination. If the blood titer remains low and the screen examination, and spinal fluid examination are still negative, probate another six months. If the spinal fluid findings are positive upon completion of treatment, treat as indicated for neuro-syphilis.

EARLY LATENT SYPHILIS

System II is used for uncomplicated early latent syphilis of more than two years and less than four years duration. If it is impossible to determine accurately the date of infection a patient less than twenty-six years of age is classified as early latent, whereas a patient over that age is classified as late latent. Two positive serological tests are required before treatment is started. Spinal fluid examination is done at the beginning of the course instead of at the end as in System I, and a negative spinal fluid is necessary, or else this system is not used.

The patient is seen once each week for the first ten weeks and receives mapharsen and bismuth both at the same visit. During the second ten-week period the patient receives an injection of mapharsen twice each week. During the third ten-week period injections of mapharsen and bismuth are given at the same visit once each week. A total of 40 injections of mapharsen and 20 of bismuth are administered. The course of treatment extends through thirty weeks.

At the completion of this course of treatment a serological test is performed and the patient is advised to return in six months. The probationary program is conducted the same as with System I.

LATE LATENT SYPHILIS

System III is used for uncomplicated late latent syphilis when the infection is thought to be of four years duration or more. Two positive serological tests are required for this diagnosis. A spinal fluid examination is performed before treatment is begun and a negative result is necessary if System III is to be adopted.

The patient reports for treatment once each week. During the first ten-week period bismuth is administered. From the eleventh to the twenty-fifth weeks mapharsen is injected. During the final ten weeks bismuth is again given. A total of twenty injections of bismuth and fifteen of mapharsen are administered over a period of thirty-five weeks. At the end of the course of treatment a quantitative serological test is performed. The patient is advised to return in six months for a screen examination and another quantitive serological

test. Probably no more treatment will be required. A negative serological reaction is not anticipated.

EARLY CONGENITAL SYPHILIS

Congenital syphilis is classified as early congenital syphilis when the patient is less than two years of age. The schedule outlined below is followed.

Week	*Drug*
1-7	Sulpharsphenamine
8-11	Bismuth Subsalicylate in Oil
12-19	Sulpharsphenamine
20-25	Bismuth
26-33	Sulpharsphenamine
34-41	Bismuth
42-49	Sulpharsphenamine
50-59	Bismuth

Thereafter ten weekly doses of each drug are administered in alternating courses. Treatment is carried out over a period of eighteen months. A serological test is performed before each course of arsenical drugs, and a spinal fluid examination is done sometime before completion of the treatment.

The patient is advised to return in six months for physical examination and serological tests. This is to be repeated each year.

LATE LATENT CONGENITAL SYPHILIS

Late congenital syphilis is the congenital syphilis of persons more than two years of age. Two positive serological tests are required to establish the diagnosis. Physical examination is performed and the spinal fluid is examined before treatment is begun. The following schedule is used:

Week	*Drug*
1-6	Bismuth
7-16	Mapharsen
17-26	Bismuth
27-36	Mapharsen
37-46	Bismuth
47-56	Mapharsen

Treatment is carried out during a period of one year. The probationary program is the same as that given for early congenital syphilis.

SYPHILIS DURING PREGNANCY

Two schemes are presented below which will be found to be satsifactory in the treatment of most cases of uncomplicated syphilis during pregnancy. The patient is told that the treatment is really for the baby rather than for the mother. It should be noted that both schedules are arranged so that an arsenical drug is administered during the last few weeks of gestation.

Week of Gestation	*Beginning in First Trimester*	*Beginning in Second Trimester*
1	Mapharsen	
2	,,	
3	,,	
4	,,	
5	,,	
6	,,	
7	,,	
8	,,	
9	Bismuth	
10	,,	
11	,,	
12	,,	
13	,,	Mapharsen
14	,,	,,
15	,,	,,
16	,,	,,
17	Mapharsen	,,
18	,,	,,
19	,,	,,
20	,,	,,
21	,,	,,
22	,,	,,
23	,,	,,
24	,,	,,
25	Bismuth	Bismuth
26	,,	,,
27	,,	,,
28	,,	,,
29	,,	,,
30	,,	,,
31	,,	,,
32	,,	,,
33	Mapharsen	Mapharsen
34	,,	,,
35	,,	,,
36	,,	,,
37	,,	,,
38	,,	,,
39	,,	,,
40	,,	,,

SUMMARY

The routine treatment of uncomplicated latent syphilis in various stages is discussed. The dosages of different anti-luetic drugs are given. Schedules are presented which will be found to be adaptable in various cases.

These treatment schedules are given to apply only to uncomplicated latent syphilis, except for those applying to early congenital syphilis.

No case of syphilis can be definitely diagnosed as latent until the spinal fluid has been examined and found to be negative.

The modern trend is to administer treatment over a shorter period of time with a smaller total dosage than that used in the past.

Our ideas concerning the treatment of syphilis are and should continue to be changeable. Recent rapid treatment methods with arsenic, bismuth, penicillin, fever therapy, and perhaps other methods may cause us to abandon completely the treatment programs presented here.

15 E. Monroe

"THE RAPID TREATMENT METHODS"

PAUL S. ARMOUR, M. D.
Phoenix, Arizona

WAR furnishes ideal conditions for the spread of syphilis and other venereal diseases. The syphilis problem confronting the home front practitioner today is largely that of early syphilis. Many of these luetic patients are migratory, uncooperative and promiscuous. The need for rapid control of infectiousness warrants consideration of treatment systems requiring hospitalization for from five to ten days therapy. Other semi-intensive methods may be used for more prolonged schedules, say four to six weeks, as all syphilitic patients are not unreliable. The old eighteen months to two years treatment schedule, however, is definitely out.

At present there is no optimum schedule or system of treatment. Rapid methods range from one day to twenty-six weeks. The curative dose of Mapharsen (the arsenical of choice recommended by the U. S. P. H. S.) is believed to be a constant. It is independent of the schedule of treatment, twenty-five to thirty mgms. per kilo of body weight being considered adequate dosage; 1200 to 2400 mgms. being the total advised per patient. Bismuth, a heavy metal, is given along with the Arsenic because it seems to have an extra ordinary effect in reducing treatment failures. Bismuth Subsalicylate in Oil is the preferred preparation.

Arsenic should be given according to weight. There should be no arbitrary distinction between sexes with respect to dosage.

Schedules of early treatment of syphilis depend on the mortality one is willing to accept. When an intensive method is selected, the added risk must be borne in mind.

We will discuss briefly a number of rapid methods. These apply to cases of early syphilis, e.g. Sero-negative primary, Sero-positive Primary, Secondary, and Early Latent:

I Fever Therapy

For a while fever therapy offered favorable possibilities in the treatment of early syphilis. At the present time, and in fact for the past fifteen months or thereabouts, such treatment has been given to many patients in Jacksonville, Florida and Chicago, Illinois rapid treatment centers. This type of treatment requires the constant supervision by a doctor skilled in fever therapy and a trained attendant should always be with the patient during treatment. The mortality is around one-half to one percent. The patients must be selected and be healthy subjects. The infectious relapses are twenty to forty percent after this period of observation, namely twelve to fifteen months.

Fever kept at 106°F for eight hours, and at 106°F for five hours, are the two systems used. Additions include one dose of arsenic during this time (early, height, end) and Bismuth one time weekly for eight weeks afterwards.

When the fever therapy is supplemented with Arsenic and heavy metal the end results are not much improved. (twelve to fifteen months observation).

II The Five Day I-V Drip

The Five Day I-V Drip resulted in rather high mortality and morbidity and has been largely discontinued.

III The Eight Day I-V Drip

The Eight Day I-V Drip is being used now in many of the rapid treatment centers (over sixty altogether) in the United States, Porto Rico, and the District of Columbia, with more gratifying results. The mortality and morbidity is much less. The amount of Arsenic determined by body weight is divided into eight equal parts, and one part dissolved in 2000cc of five percent dextrose and given slowly intravenously, and this amount given daily for eight days. On the first, fifth, and eighth days Bismuth is given and one time weekly thereafter for eight weeks.

IV Multiple Injection

Multiple Injection methods are those in which one dose of Arsenic is given intravenously daily for twenty-four, thirty, or thirty-six days, Bismuth being given twice weekly.

V Local Method

Our method in the Maricopa County Health Unit is, two Arsenic weekly for twenty weeks, one Bismuth weekly for twenty weeks, making a total of forty Arsenic and twenty Bismuth.

VI Six Weeks Method

The Six Weeks Method is a method we have used in the Detention Clinic with very satisfactory results as far as lack of treatment reactions are concerned. Arsenic is given four times weekly for six weeks, making a total of twenty-four. Bismuth is given two times weekly for six weeks, making a total of twelve.

VII The Army Method

The Army Method used in the United States of America (more rapid treatments are used in the battle areas) is the same as ours except that twenty-six weeks are required instead of twenty.

Penicillin is rapidly taking the place of this method and others by the U. S. Army.

VIII Pencillin

Penicillin holds great promise in therapy of syphilis. Take two initial lesions of syphilis, the so-called chancre, treat one case with Penicillin, the other with Arsenic, Treponema Pallada will disappear from the patient treated with Penicillin much more rapidly than the one treated with Arsenic, and the lesion of the former heals quicker. The systems followed at present for Penicillin therapy of syphillis are:

(1) 1,200,000 units of Penicillin given intramusclarly over a period of eight days (20,000 units for three hours) x 60.

(2) 2,400,000 units of Penicillin given intramusclarly over a period of eight days (40,000 units for three hours).

(3) 600,000 units of Penicillin (10,000 units for three hours for sixty injections.) Plus Arsenic 1 daily x 8 and Bismuth 1-5 8th day.

Because of the long period of observation necessary for evaluation of any new anti-syphilitic agent, the ultimate value of Penicillin in syphilis is not yet known. After one year of observation, early cases of lues, given the larger dosage of Penicillin, have not suffered clinical or serological reversal except in very small percentages.

LATE LATENT SYPHILIS

In a Late Latent case (over four years), the only indication of syphilis is a positive blood plus a re-check. Do not expect a sero-reversal. In early syphilis sero-reversal is the rule. In Late syphilis, sero-reversal is the exception, and not the rule.

The prognosis for Late Latent cases, high or low titer, positive serology, negative spinal, is good. Seventy percent will never develop any serious complication, and will live in perfect symbiosis with their disease if untreated. If treated, eighty to ninety percent will get along satisfactorily. Of the thirty percent who will kick up, many will develop benign complications. A small amount of treatment is all that is needed, not eighteen months. Six to eight months of treatment is adequate. The reason for lack of serological reversal in Late Latent syphilis is thought to be because the organisms are entrenched and not reached by Arsenics. (Area of fibrosis into which the Arsenic does not infuse). Late Latent syphilis under treatment, five to ten percent will give serological reversal. Late Latent syphilis is generally overtreated. Late Latent syphilis requires less theatment than Early syphilis.

1206 West Madison

THE TREATMENT OF NEUROSYPHILIS

LOUIS SAXE, M. D.
Phoenix, Arizona

THE treatment of neurosyphilis presents problems somewhat different from those encountered in the other forms of syphilitic infection. Many patients do not develop symptoms of neurosyphilis and some fail to show serological evidence of infection of the nervous system by present laboratory methods and clinical methods. When the infection becomes manifest in the central nervous system, it becomes difficult to treat because of the inaccessibility

of the brain, the cord and its coverings, and special methods are required.

The treatment of neurosyphilis should be primarily prophylactic. This statement may be repeated—the treatment of neurosyphilis should be primarliy prophylaetic. The energetic treatment of all cases of early syphilis would probably prevent the development of neurosyphilis except for the few cases of the parenchymatous type. These may also be prevented when we thoroughly understand the factors preventing parenchymatous involvement in one case and permitting it in another. Asyptomatic neurosyphilis must be treated strenuously by routine methods and when progression continues in spite of such treatment, special therapies should be considered. In neurosyphilis each case must be considered individually and treatment planned according to all the facts—clinical, laboratory and social, in each case. The outlines that are herewith presented are suggestions in planning the therapy in the particular case. The present treatment of syphilis is now undergoing changes. The introduction of massive dose methods and the present experimental trends with penicillin will not be discussed because the proper evaluation of these methods ean not now be made.

Outline of therapy in various types of neurosphilis

(a) Asymptomatic nenrosphilis;

"The prognosis of asymptomatic neurosyphilis is equally gloomy whether discovered early or late in the course of the infection, unless the development of clinical neurosyphilis is prevented by appropriate intensification or modification of treatment" (Moore) The difference in management lies in the degree and type of "intensification" used. Intensification should mean an increased dosage of arsphenamine-like drugs given every 4 to 5 days and given by the continuous program. Patients with Group I serology may respond to this program. If at the end of 3-6 months evidence of progression or in the face of failure to improve tryparsamide and fever therapy must be used.

Outline for Group I and II serologies (See blackboard)

1. 20 injections of tryparsamide of 3 grams each.
2. 6 weekly injections of mapharsen of maximum weight dosage .06.
3. Recheck of neurological, mental physical and blood and spinal fluid examinations.

 If improved.
4. Repeat 1.
5. Six weekly injections of bismuth in oil of .26 grams each. Repeat 3 etc.

 If the examination at 3 shows progression, no ehange in the spinal fluid and the routine Group III and IV is substituted.

OUTLINE FOR GROUP III AND IV

1. Fever therapy.
 a) Malaria therapy 50 hours of fever above 104°F (R).
 b) Artificial fever therapy 36 hours of fever at 105°F (R).
2. 20 injections of tryparsamide of 3 grams each weekly and with 8 injections of bismuth salicylate of .26 grams each during the first 8 weeks of tryparsamide therapy.
3. 6 weekly injections of mapharsen of .06 grams each.
4. Re-examination physical, neurological, mental and complete serology.
5. 20 injections of tryparsamide.
6. 6 injections of bismuth.
7. Repeat 4 and 5 etc. for a minimum of 2 years eontinuous therapy, or for one year after the spinal fluid serology is reversed, or for a minimum of 3 years of treatment in cases who remain serologically positive in spite of continuous treatment.

If at any time there is evidence of clinical progression the fever therapy should be repeated. With this routine almost all cases respond favorably. Those who fail to do so usually have the paretic formula (Group IV) when first diagnosed and they usually develop clinical signs of tabes dorsalis or general paresis. In these cases, however, the clinical sypmtoms are usually of the mild type and continuous energetic treatment will usually result in a satisfactory remission.

Simpson reports that 61% become seronegative when treated with combined fever and chemotherapy and found definite improvement in another 16%.

Troutman of the U. S. Public Health Service found reversals in 66% of his cases treated by chemotherapy-fever method and reported no development of clinical signs of neurosyphilis during his period of observation.

(b) *Meningeal neurosyphilis*

Acute syphilitic meningitis represents a medical emergency and prompt treatment is indicated. Where the intracranial pressure is increased withdrawal of more than the usual amount of spinal fluid may decrease the intensity of the headache. Give bismuth with arsphenamine-like substance at 3-5 days intervals.

For the energetic treatment of meningeal syphilis fever therapy may also be instituted.

1. 12 bi-weekly heatings of 3 hours each at a temperature of 105.8°F (R).
2. With each heating administer marpharsen .04 and bismuth salicylate .26 grams.
3. Then 20 injections of tryparsamide of 3 grams each.
4. Re-examination of clinical and serological status.
5. If spinal fluid and clinical picture are improved or normal give 12 weekly injections of marpharsen .06 grams each, then
6. 12 weekly injections of bismuth of .26 grams each, then
7. 20 weekly injections of tryparsamide, etc.

Complete clinical and serological re-examinations should be made each six (6) months.

Chronic luetic meningitis is treated by the same routine. Fever need not be given at the first stage in treatment and the patient may require a course of chemotherapy before fever is instituted. Malaria may be given this type of infection with beneficial results, it is of course not effective in the fulminating type because of the incubation period of the organism.

Death rarely occurs in the early phase of meningeal neurosyphilis. Many of the acute cases recover from all symptoms if properly treated but they should continue for a minimum of 2⅛ to 3 years of continuous treatment irrespective of the clinical or serological improvement. About 30% of improperly treated cases will show progression to the more serious forms of neurosyphilis. A few cases will recover from the acute phase only to later develop symptoms of the tabetic or paretic type. In these cases the more radical treatment of administering fever therapy and pentavalent arsenicals in the early stage of the disease is favored. The surgical treatment of the chronic form of meningitis often does little to arrest the progression of the disease if the other methods fail. Often the adhesions reform after a quiescent period of 6-8 months, and the progression of the optic atrophy continues.

Vascular and Diffuse Meningo-Vascular Neurosyphilis

The treatment problems in these two forms of syphilis are essentially the same and will be presented together, these forms of neurosyphilis offer more difficulties in treatment than the other forms because too energetic type of treatment will result in the death of the patient and too little treatment will result in the progression of the disease. The unpleasant fact is that the vessel walls are involved in the luetic process and that intensive treatment will produce a rapid dissolution of this tissue and that a hole may be produced in the vessel wall. Treatment is instituted with the hope that the luetic tissue will be replaced by scar tissue and prevent the formation of the hole.

Outline.

1. 12 weekly injections of bismuth salicylate of .26 grams each.
2. 12 weekly injections of mapharsen beginning with .03 grams and increasing to maximum according to body weight.
3. Complete clinical and serological re-examination.
4. If stationary or improved 20 weekly injections of tryparsamide 3 grams each.
5. Repeat bismuth and mapharsen.
6. If at the end of 6 months there is no recurrence of the vascular phenomena and there is evidence of beginning parenchymatous involvement, the fever—chemotherapy routine used in general paresis should be used.
7. If there is rapid progression with convulsions or vascular phenomena one must follow treatment according to the individual details of the case. Fever terapy is not without danger and in those who suffer vascular accidents it is considered dangerous. Tryparsamide then re-

mains the treatment of choice. If the progression is that of the paretic type fever therapy may be used in spite of the hazards involved.

Many patients with this form of neurosyphilis respond favorably to a conservative form of treatment, to the convulsive phenomena and hemiplegia remain as an evidence of their disease, but they show little progression. The chemotherapy should continue for a minimum of 2½ to 3 years. Treatment must be continued, and in those who do not take this course 80% have a satisfactory response, those who do not usually develop the signs and symptoms of general paresis or become permanent cripples due to major vascular accidents.

Parenchymatous Neurosyphilis

A) General paralysis of the insane—
General Paresis.

Treatment is immediate, intensive and prolonged. This most feared type of syphilis could probably be prevented in the majority of the cases by adequate treatment of early syphilis or by the energetic treatment of neurosyphilis in the asymptomatic phase. Some believe that a small number of patients will develop paresis irrespective of the treatment in the early stage. However, to repeat, the treatment of neurosyphilis should be considered prophylactic.

Outline for General paresis

1. Fever Therapy
 a) Malaria therapy
 50 hours of fever at a temperature above 104°F (R)
 or
 b) Artificial Fever therapy
 at least 12 heatings of 3 hours each at a temperature of 105°F (R) given twice weekly Chemotherapy is given with each heating.
2. *Tryparsamide.* 20 weekly injections of 3 grams each combined with 12 weekly injections of bismuth salicylate.
 or
 Alternate the bismuth about the third day.
3. Then 12 weekly injections of mapharsen. Repeat the above for a period of 3 years. Complete clinical and serological re-examinatin.
4. Patients should remain under observation during the remainder of their life with annual checkups.

b) *Tabes Dorsalis*

Here too the treatment is intensive continuous and prolonged. The plan followed in paresis should be used in tabes. Fever therapy is objected to because it is claimed to hasten optic atrophy, however, it has been advocated in the treatment of optic therapy. The Swift-Ellis technique is suggested in those cases with signs of optic atrophy, and in those suffering from lightning pains. In the hands of an experienced roentgonologists relief may be obtained by deep X-ray therapy over the lower dorsal and upper lumbar spine. The procedure is as follows; 300 Roentgens per treatment—give three (3) treatments at 2 day intervals. (Using 10x20 portal over the lower cord region, depending upon the response may then treat the upper cord. Give at 200 K.V using ½ copper plus one aluminum filter.)

C) Primary optic atrophy.

Primary atrophy of the optic nerve is the most difficult form of neurosyphilis to treat and usually results in blindness, unless treatment is vigorous and early. Moore states "only two forms of treatment seem to be of any avail, subdural therapy or fever therapy; and one of these should be adopted as soon as the diagnosis is made. Any other therapeutic efforts are usually useless in arresting visual failure and constitute dangerous temporizing." He favors subdural therapy. He recommends the use of arspenamnized serum starting with a dose of 5 cc. and increasing to 15 cc. introduced cisternally. The treatment is given every two weeks and administered not more than 6 times. The prognosis is grave.

For the Blackboard

Asymptomatic Neurosyphilis—

Spinal fluid findings.

Group I Cell Count, 10 or more; Globulin, pos. or neg.; Wasserman, neg.; Colloidal Gold, no change.

Group II Cell Count, normal; Globulin, normal or inc.; Wasserman, positive; Colloidal Gold, indeterminate or syphilitic zone type.

Group III Cell Count, 30 or more; Globulin, inc.; Wasserman, 4 plus; Colloidal Gold, negative or syphilitic zone type.

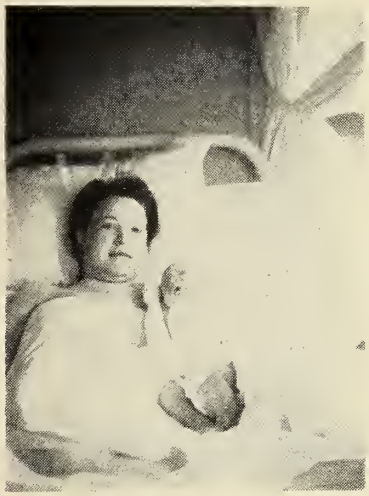
Group IV Cell Count, above normal; Globulin, marked inc.; Wasserman, 4 plus; Colloidal Gold, paretic type.

717 W. Palm Lane

SPONTANEOUS SUBCUTANEOUS EMPHYEMA OCCURRING DURING LABOR

MATTHEW COHEN, M. D.
Phoenix, Arizona

A 19-year-old primigravida, went into labor on May 15, 1942 at about 6 p.m. and progressed slowly but satisfactorily until about 1 p.m. May 16, 1942 or 19 hours later when dilatation of the cervix was complete. The waters ruptured about 1:30 p.m. or 30 minutes later. I was



in attendance on her for the last 3 hours of her labor. Her appearance was normal when I first saw her. Her pains for the last 2 hours were about every 2 minutes and were strong although they lasted only 20-30 seconds. As was customary, since she seemed to be making slow progress, I instructed her to take a deep breath, hold it, and push down. In spite of good cooperation she made very slow progress. At this time a vaginal examination revealed that the head was on the perineum and was in the occiput posterior position. One capsule of seconal had been given for pain and was producing a very satisfactory analgesia.

Between her pains I observed that her face appeared puffy. I thought that she was developing some edema of the face. The blood pressure was taken and found to be 120/80. Pulse was 120 but of good quality. I forgot about it momentarily but soon it was very prominent. Three minims of pituitary was given hypodermically as I was anxious to terminate labor. This was repeated in about 10 minutes when no apparent results were forthcoming. Finally to my great relief the patient delivered a 9-pound normal baby. The third stage was normal. Curiously enough there was no perineal tear.

Following the delivery I re-examined the patient and the following was found. Blood pressure 130/80. Pulse 110, which rapidly lowered to 85. Respirations were 15-20 a minute. Breath sounds were normal. There was extreme swelling of all the soft tissues of the face, neck and upper chest. There was plainly visible audible and tactile crepitation over the entire area described. Examination of the mouth and throat revealed no mucous membrane tears. The patient complained of no pain except that she stated she felt swollen. She also complained of difficulty in swallowing.

In questioning the patient about her past history she stated that except for the usual exanthemata of childhood she had never been sick a day in her life.

The family history was irrelevant except that her mother died of pulmonary tuberculosis.

Treatment consisted of elevation of the head of the bed which gave her quite a bit of relief, and hypnotics.

A review of the literature on this condition, which is not described in standard textbooks, reveals that is an unusual and interesting complication of labor. The first case was reported in 1783.

Gordon in 1927 reviewed 130 cases from 1783. Since 1927 only one case has been reported in the literature and this will make the second.

Gordon states that the condition should be called respiratory emphysema to distinguish it from subcutaneous emphysema that would arise from gas forming bacteria in the birth canal.

The etiology of this condition is obscure. It usually occurs in primipara, with somewhat prolonged labor. Very few of the cases have predisposing pulmonary pathology as it occurs most commonly in young robust women. Dystoria is common and most cases have a long

Presented at Staff Meeting at Good Samaritan Hospital, Phoenix, Arizona, October, 1945.

labor. It may occur in the first stage but usually occurs in the second stage. Occasionally it is not discovered until the third stage.

Out of 130 cases only two died which indicated that the mortality is very low.

Faust tried to reproduce the effect 5 days after it occurred by having the patient blow into a rubber bag connected by a long hose. The patient tired out without showing any additional air in the tissues.

That is about all the clinical research that has been done on this interesting condition.

Gordon in trying to explain the mechanism thinks "that during deep inspiration accompanying labor pains a large volume of air is stored in the lungs; the chest is fixed and the thoracic cavity narrowed. The force will act then entirely on the contained organs and the parenchyma, which normally meets no resistance, will give away.

If the force continues to act the air passes under the pleura to the root of the lung, opening an easy path through the sheaths of the great vessels, infiltrating the mediastinum and following the vessels of the trachea into the neck, from where, with but little resistance, it finds its way through the cellular tissues. Pneumothorax has not been observed in any case."

Conclusions:

1. An additional case of respiratory emphysema is presented.
2. Etiology and pathology is still obscure.
3. Prognosis is generally good.
4. Treatment is expectant.

15 East Monroe.

DOCTOR!

IF YOU HAVE NOT REPLIED TO THE LETTER FROM THE COMMITTEE ON MEDICAL ECOMOMICS GIVING THEM YOUR OPINION ON A MEDICAL SERVICE PLAN FOR ARIZONA, DO SO AT ONCE AS THE COMMITTEE WISHES TO MAKE A FULL REPORT TO THE HOUSE ON APRIL 28.

PLEASE RESPOND AT ONCE.

Committee

Cancer Section

APRIL—CANCER CONTROL MONTH

E. PAYNE PALMER
Phoenix, Arizona

Cancer ranks second as the cause of death in Arizona and in the United States. One hundred and sixty-five thousand (165,000) death certificates annually give cancer as the cause of death. Approximately five hundred thousand (500,000) persons have cancer in the United States and Arizona has its full proportion. Roughly, one out of every six of you who read this will die of cancer—unless you do something about it. Precious little is being done. The truth is, the doctors and the laity do not support the drive to stamp out cancer.

Cancer is the greatest killer of women and the second greatest killer of men. Yet, the American Cancer Society received less than a half million dollars last year for education and research against a disease that kills so many men, women and children annually. Last year alone, the National Foundation for Infantile Paralysis raised almost eleven million dollars ($11,000,000) to fight a disease that attacked only 12,429 persons last year and killed not over 1100. This organization is carrying on a splendid program and is entitled to all the support that can be given it.

This year there will be approximately two hundred thousand members of the Woman's Field Army working throughout the United States to make April—Cancer Control Month—an outstanding achievement. Mrs. Thomas A. Hartgraves is Commander of the Arizona Field Army. She has a splendid state wide organization which is prepared to carry on an active cancer control program during April. The Woman's Auxiliary of the Arizona State Medical Association is sponsoring the campaign and giving valuable assistance. The American Cancer Society, Arizona Division, was recently incorporated and the organization perfected. Ample funds are in the bank to finance our program.

Therefore, it is the duty of each member of the Arizona State Medical Association to come to the aid of these earnest workers and help make the cancer control program in Arizona an outstanding event, one long to be remembered.

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Editorials

Medical Service Plans

The next problem which confronts the Arizona State Medical Association, is the organization of a Medical Service Plan. If this is attempted it will be the greatest single task that the State Society has ever taken upon itself. At its last meeting in January, the State Council asked the Committee on Economics to make a survey to determine the possibilities for such a step. If we are to keep in line with the progress in other states we should be taking active steps in that direction. About twenty other states either have Service Plans, or have authorized their Councils to proceed with the formation of one. We will be able to profit by the experiences and mistakes of other states who have pioneered in this adventure, and in this way our procedure can be expedited.

In another part of this issue, a full history of the Michigan Service Plan is reprinted. Michigan has the oldest and largest Service Plan in the nation in operation. It comprises about 700,000 subscribers or about one-seventh of the State's population. They have demonstrated that such a plan can be successful. But they emphatically warn us that the safest way to proceed is with a plan offering limited coverage at the start, and adding benefits as the organization grows.

There are two distinct plans. One is the Medical Service Plan which would be operated along identical lines with the Blue Cross Plans. Or to make it more familiar to everyone, it would be very similar to our Industrial Commission, except employers would bear no part of the cost. Groups of workers would be enrolled and the cost of the premiums would be deducted from their payrolls. Fee schedules would be set up and payments made direct to the physician. Physicians of course would be asked to join in the plan. The simplest plan is one starting out by covering Surgery and Obstetrics in the hospital. The other alternative is the Medical Indemnity Plan. Under this system the subscribers are paid their benefits direct, and they in turn pay the physician and hospital bills. The Medical Profession is definitely divided between these two plans. At first glance, and to those unfamilior with the operations of the two plans, the Indemnity Plan seems the most advisable. It would seem to be keeping farther away from the proposed Federal or State Plans. Also that it is easier and more certain to maintain the physician-patient relationship upon which the American System of Medicine has been built. It is also argued that the Medical Service Plan sets a maximum fee, while the Indemnity Plan sets a minimum plan. While a number of Medical Service plans have failed, those are the plans which have really proved successful. To date no Indemnity Plan operated by a State Society has reached the place where it can be pointed to as a success. And the proponents of the Medical Service Plans warn us that the Indemnity Plans are doomed to failure.

PUBLIC OPINION

Some idea of what the American people are thinking about in regard to their future Medical care can be arrived at by analysing some of the Polls in Public Opinion which have been conducted in the past two years. The Magazine "FORTUNE" conducted their Poll and concluded that only about 27% of the population were opposed to Federalized Medicine, and 73% were in favor of some form of government operation of hospitals and the rendering of Medical care. And then in an extensive article entitled "U. S. MEDICAL TRANSITION" in their December issue they concluded as follows:

> "No complicated, flexible, voluntary compromise between the status quo and state medicine will have a reasonable chance of growing to meet all unmet medical needs except under two general conditions. The first is that the country be prosperous, with reasonably full employment so that the bulk of the people are able to pay

their own contributions without government help. Second, government at all levels, employers, the great mass of potential patients, and, above all, the medical profession must show a degree of social inventiveness and a determination hitherto unknown.

"If either of these conditions is absent, the U. S. is probably headed through a spotty and unsatisfactory experience with voluntary medical insurance toward compulsory nationwide insurance. Dr. Alan Gregg of the Rockefeller Foundation thinks that medicine may be in the state that education was in a hundred years ago—moving from a private to a public sphere. The analogy is too close for the comfort of those who want guarantees that medicine will not fall under the control of public servants, those who prefer voluntary methods, dispersed controls, and many minor forms of collectivism to one big collective step. The responsibility of the doctors takes the form of a dilemma that they must face; if they do not themselves aggressively foster and encourage considerabe reform in medical economics, they are likely to find themselves swept into something that will seem revolutionary by comparison. By one means or another, medical security is undoubtedly coming. The consumers are making a social issue of it and it will, before too long, be met socially."

Separate Public Opinion Polls have been conducted by the National Physicians Committee, the State of California, and the State of Michigan. Roughly speaking and averaging their conclusions: about 35% of the people are against Federalized Medicine, and about the same number think that something should be done to render the payment of medical bills—especially so-called catastrophic illness—easier. About 35% are in favor of government paid medicine, and about 30% are undecided.

WHAT SOME OF THE STATES ARE DOING

Michigan is the outstanding example of a Medical Service Plan which they claim is working successfully. They are rapidly enlarging the groups of subscribers which have been the main criticism of our prepaid, voluntary, nonprofit Service Plans, i. e. that they reached only a small percentage of the population. They have also won this support and cooperation of most of the Medical Profession, many of whom feared it, and despaired of its success. They also found in their own Public Opinion Poll that only 25% of the population knew that there was such an organization in existence.

California Medical Service is the second largest plan in operation and is the next one after Michigan that is pointed to with success. It was organized in 1939. It was slow for the first four years, enrolling about 1000 subscribers a month. But in the final four months of 1944, it added 12,000 a month. It now has an enrollment of 125,000.

But in spite of the aggressiveness of the California Medical Society, they have their own little Murray-Wagner-Dingall Bill. In December, Governor Warren called members of the State Medical Society together and told them that California needed a Compulsory Health Insurance Law, and in his address to the State Legislature in January he demanded such a law, and submitted his plan. The plan calls for compulsory contribution from both wage earners and employers of 1½% each. It promises free choice of physicians.

The State council of the Medical Society met in extraordinary sessions and drew resolutions violently opposing such legislation at this time. Incidentally it has been shown that where free Medical care is offered, the demand for care has been increased from 2 to 4½ fold. Visualize what would happen at a time like this when every Doctor is working beyond his limit, and to have this demand for care just double.

Iowa has a plan in the process of organization. It differs from the Michigan Plan in that it offers Medical as well as Surgical and Obstetrical Service, while in the hospital. An interesting item about the Iowa plan is that it is being underwritten by the Bankers Life Insurance of Des Moines, which is one of the strongest Old Line Insurance Companies in this nation.

The Medical Profession of the Metropolitan area of New York City have announced the inauguration of a full scale voluntary medical insurance program, to be known as United Medical Service. It states that its policy is designed to supplement and enhance the hospital insurance plan of the Associated Hospital Service of New York. It is being introduced as "The Doctor's Plan". Negotiations are proceeding also with the "Health Insurance Plan of Greater New York" sponsored by Mayor La Guardia.

The prospect of developing a sound basis active participation by organized medicine is reported to be good.

COMMENT

The above remarks merely touch the high spots of the activities in voluntary, prepaid, non-profit health insurance. The first problems for our State Society to determine is whether the field is large enough in Arizona to launch a Medical Service Program. And if the answer is found to be in the affirmative, we should proceed. But it is to be remembered that it will no doubt be the largest single undertaking this State Society has ever attempted, that it will require the full cooperation of every member, and that it is a job the doctors will have to do themselves.



Charles Paul Austin, M. D.

PRESIDENT-ELECT

Dr. Charles Paul Austin, President-elect of our Association, is at present chief surgeon for the Phelps Dodge Copper Company at Morenci, Arizona. Dr. Austin will take his place as President when the Council and House convene this April. The scientific sessions have been cancelled at the request of the Office of Defense Transportation as you will note in other pages of this issue of the Journal. As chairman of the Committee on Scientific Assembly, Dr. Austin had arranged, with the aid of his committee and approval of the Council, an instructive and especially interesting program, with a group of instructors from Baylor University as guest speakers. The papers were to have been largely on war-borne diseases. It is regretted that the exigencies of war required the cancellation of this important scientific assembly.

Dr. Austin received his medical education at Loyola University, Chicago, graduating in 1912. In 1911 he married Miss Myrtle Brown of Canada. There are two grown children—a son and a daughter, the son now serving the armed forces. Dr. Austin served as a medical officer for two years during World War I.

Prior to coming to Arizona in 1919, Dr. Austin practiced in Little Rock, Arkansas and El Paso, Texas. He has been located in industrial practice in Arizona since coming here. He holds membership with the American Medical Association and the Amercan Association of Industrial Physicians and Surgeons.

In the Arizona Medical Association, Dr. Austin has been most active. He has served on the Committees on Industrial Health and Industrial Relations. He was a member of the Medical Advisory Board under the Workmen's Compensation Act and is at present a member of the Board of Silicosis under the Occupational Disease Act. He served on the Council as Councilor for the Southern District before being elevated to the high office of President-Elect. He has been most faithful in the discharge of these various duties.

With his diligence to duty and his insight and interest in association activities, Dr. Austin will serve with credit to himself and the Association in the high office of President for the coming year.

Vocational Training Rehabilitates Disabled

More than 75,000 men and women who were unable to hold a job because of some crippling disability have gone on the 1944 payrolls as a result of assistance given them under the Federal-State program for vocational training, Federal Security Administrator Paul V. McNutt announced on October 29. This total, much larger than that for any previous year, comes, he said, from a tabulation of reports made by

the State boards of vocational education to the Office of Vocational Rehabilitation of the Federal Security Ageney.

Emphasizing the economic importance of the rehabilitation program, Mr. McNutt cited the results obtained by the District of Columbia Rehabilitation Service during the fiscal year 1943-1944. A summary of its report accounts for the rehabilitation of 435 handicapped persons. Of this number 161 were placed in government jobs and 274 in jobs in industries essential to the civilian economy.

The annual earnings of the 435 persons rehabilitated, it was pointed out, will amount to $714,636 the first year after their rehabilitation. The average weekly wage was raised from $28.65 in the fiseal year 1942-1943 to $31.59 in 1944.

Of all the rehabilitated cases, 76, or 17.5 per cent were referred by the District of Columbia Board of Public Welfare. The annual earnings of this group alone will amount to at least $103,320. If these persons had not been restored to remunerative employment, Mr. MeNutt said, it would have cost the Board of Public Welfare $25,016 as an annual recurring expense, while the cost of rehabilitation amounted to only $3,592.—Release from the Office of War Information, Oct. 29, 1944.

Hospital Survey Opens Fight On Tuberculosis

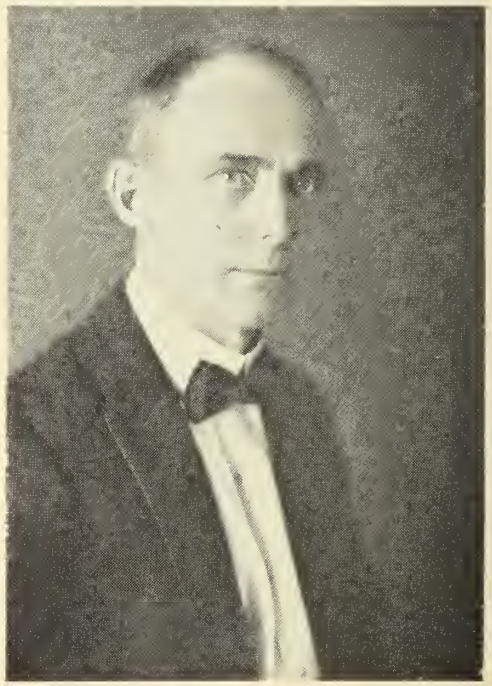
Causing over half as many deaths since Pearl Harbor as the war itself, tuberculosis has become one of the world's greatest murderers.

That the hospitals of America may facilitate the eradieation of human tuberculosis, 6500 of them this week began partieipation in a survey inaugurated by the American Hospital Assoeiation to determine the number of institutions now examining their patients and personnel as a part of the regular admission routine.

"Of every 100,000 people in the United States in 1943, forty-four died of tuberculosis," stated Hugo V. Hullerman, M. D., seeretary of the Association's Council on Professional Practice whieh is making the survey. "Thousands of men and women never realized they had the disease until it had reached its incurable stages.

"Programs of routine examination have been found to discover 70 to 75 per cent of the cases in their minimal or primary stages. Without these precautions, as many as 90 per cent might go undiseovered. Hospitals in 1943 admitted over 27 million patients," he continued, "and sinee one person in ten makes use of his hospital at some time during a year, a nationwide program of hospital examination would reach most of the country's population in a few years, ineluding many who would not be included in employee surveys."

Results of the American Hospital Assoeiation survey will be used as a guide to hospitals and to state hospital associations in their future efforts, and as a measure of future programs for the continued improvement of the health eare of the people in stamping out the disease which is striking yearly such a large percentage of the population.



John W. Flinn

(1870 - 1944)

In the death of Dr. John W. Flinn, of Prescott, on November 21, 1944, another of the rapidly dwindling group of pioneer medieal men of Arizona passed to his reward. During his more than forty years as director of the nationally known Pamsetgaaf Sanatorium, by his wisdom, uprightness and forcible personality, Dr. Flinn carved for himself an enduring place

in the medical history of this state, through his activities in the Yavapai County Medical Society, and through his persistent research and keen clinical judgment, he made a lasting impression on the medical thought and achievements of his generation.

John William Flinn was born on July 10, 1870, in the town of Wallace, province of Nova Scotia, Canada. He was the youngest of six children born to Thomas Flinn and Annie Cameron. On his father's side he was descended from Manxmen, his grandfather having come to Canada from the Isle of Man. All of his mother's people had come to Canada from Scotland.

At the age of fourteen, John Flinn was sent to Pictou Academy, in Pictou, Nova Scotia, where his high school course was completed. He received his medical degree from McGill University in 1895, following which Dr. Flinn returned to his home town and engaged in general practice until 1898, when he was forced to change climate because of a chronic pulmonary tuberculosis from which he had suffered for some years. He came to Arizona and located in Kingman in September, 1898, where he engaged in general practice until 1902, in which year he moved to Prescott. Shortly after his arrival in Prescott, he became ill with tuberculous pneumonia which kept him bed fast for six months or more. Following recovery from this illness, he recognized that his physical condition would not permit him to engage in a general practice; being encouraged by an eastern physician who had a patient requiring sanatorium care, Dr. Flinn, in 1903, established "Pamsetgaaf Sanatorium" in the pines west of the town of Prescott. Having been impressed by Osler's dictum regarding tuberculosis, that one should have "pure air, maximum sunshine, equable temperature"; he took the first letters of these words and added "good accommodation and food", creating the name "Pamsetgaaf." This sanatorium was the pioneer institution of its sort west of Mississippi, and here Dr. Flinn carried on his clinical and research work in tuburculosis during the next forty years, continuing as its medical director to the time of his death.

During this four decades of fruitful research and treatment of tuberculosis, Dr. Flinn saw many changes in the concepts regarding the disease, several of which he was instrumental in bringing about. He was not a prolific writer, but was a constant reader and keen observer of the work of others, a severe critic of his own practice and results of which he kept a detailed record and, from time to time, he presented carefully prepared papers, which were always eagerly received and listened to with respect by his confreres at home and abroad. There is appended below a list of the most important contributions of Dr. Flinn and his associates to the medical literature of his day.

From observation of his own case and from study of other patients, Dr. Flinn early in his practice became impressed with the value of rest in the treatment of tuberculosis. Although Hilton (in 1860) had emphasized the value of rest in acute and chronic inflammation and Wier Mitchell (1874) had developed his rest treatment for neurasthenia and hysteria, the American medical literature at the beginning of the twentieth century contained practically no reference to the value of rest in the treatment of pulmonary tuberculosis. In June, 1913, at the Annual Session of the American Medical Association, in Minneapolis, Dr. Flinn presented a paper on "Rest and Repair in Pulmonary Tuberculosis."[5] In this paper he recommended that "a person should be confined absolutely in bed for at least a month and in the great majority of cases for two months, and this regardless of whether there is fever or not." This comparatively mild statement, in the light of present day practice, was regarded as a very revolutionary idea and it is interesting that Dr. Richard Cabot of Boston, among others, in discussing the paper, took a somewhat skeptical viewpoint with regard to such radical treatment. Dr. Flinn had pointed out in his summary that "although much good has been done in the last ten years on the influence of serums, vaccines and other special treatments in pulmonary tuberculosis, so much has been written along these lines that the profession is apt to forget that fresh air, good food and rest are still the sine qua non of the treatment of the disease."

Throughout his medical life, Dr. Flinn insisted on what he called the rational treatment of tuberculosis, and was not swayed from this by the vogue for tuberculin or any other specific types of treatment. In September of 1914, he read a paper before the Missouri Valley Med-

ical Society on the rational treatment of tuberculosis, this being published in the Interstate Medical Journal, under the title, "Climate and Its Relative Importance in the Treatment of Pulmonary Tuberculosis." Although he agreed with Barlow and other authorities of the day that climate played an important role in the treatment of tuberculosis, he insisted that "if the patient must choose between climate and good care, he should take the good care and let the climate go."

In his advocacy of so-called postural rest in the treatment of lung tuberculosis, he did not neglect other methods of securing rest. He was one of the early users of pneumothorax and in his seventy-fifth year was still employing this method. He was a strong advocate of surgical procedures in the treatment of tuberculosis in selected cases and many years ago, before there were any chest surgeons in the state, he arranged for Dr. Leo Eleosser to come to Prescott and perform a thoracoplasty.

In addition to his work in pulmonary tuberculosis, Dr. Flinn had extensive experience in tuberculosis of the bones and joints. Early in his career he came under the influence of Rollier and was one of the first in the West to use heliotherapy in a systematic and scientific manner.[20]

Because of his own pulmonary condition, Dr. Flinn was forced to spend each afternoon at bed-rest, and he became a great student of the literature on tuberculosis and other lung diseases. He became interested in the work of Cunningham and Sabin in the significance of the differential blood count. He installed x-ray and clinical laboratories at Pamsetgaaf Sanatorium long before such refinements in medical practice became generally popular. With the help of competent technicians and later in collaboration with his two sons, he carried out extensive research in differential blood counts, serology and blood chemistry, x-ray findings, and correlated these with his careful clinical observations. This work is reflected in several notable papers read before the National Tuberculosis Association, the Medical & Surgical Association of the Southwest, and other societies.[12, 13, 16, 19, 23]

Dr. Flinn's work on mouiliasis of the respiratory tract is a fascinating story of adventure into little known medical paths, calling for keen clinical insight and judgment, persistent research, and a final masterful summary of data accumulated by observations extending over several years. This work must have brought him the greatest pleasure of his life, because in it he had the active collaboration of his two physician sons.[21, 22, 24]

Throughout his whole medical life, in spite of physical handicaps, Dr. Flinn gave generously of his time and strength to organized medicine. One of the "famous fighting four" of Yavapai County, he was always in the forefront of any constructive activity of his own county medical society or the state organization. He was made secretary of the Arizona State Medical Association in 1908 and served through 1911, when he was forced to relinquish this office because of physical limitations. Urged to accept the office of president, he did not feel able to undertake the obligations of that office until 1914, when he was unanimously elected to this highest honor in the Association. His interest in the welfare of the Association never waned during the succeeding thirty years. A perennial delegate from Yavapai County Medical Society, his counsel was sought on all important questions up to the very time of his death. His last official service to the Association was as a member of the important Subcommittee on Silicosis, out of whose work came the Arizona Industrial Disease Law. His last medical paper was his report on "The History and Causes of Silicosis", this being a report of his assignment on this committee. [26]

Dr. John Flinn was married to Margaret Mackay at Wallace, Nova Scotia, on March 14th 1894. She accompanied him to Arizona and throughout the years of his illness and the lean years of creating and building a sanatorium she was his constant companion, nurse and helpmate. To them were born three sons and two daughters. Dr. Zebud M. Flinn died in 1940. Dr. Robert S. Flinn, Mrs. S. W. Ensminger, Capt. John S. Flinn, Mary Flinn and his widow survive to mourn the passing of husband and father.

Dr. John Flinn—a brave warrior, a good friend, a useful citizen, a worthy and respected confrere—we who remain glory in your achievements and will ever cherish your memory.

W. W. W.

PARTIAL LIST OF MEDICAL ARTICLES BY DR. JOHN W. FLINN

1. Chronic nephritis and its associated lesions. Sou. Calif. Prac., March, 1909 (with H. T. Southworth).
2. Immunity and serotherapy in tuberculosis. (Read at Ariz. State Assn. Meeting, May 19-20, 1909.)
3. Preventive Medicine in the southwest; its aims and limitations. New Mex. Med. Jour., Feb., 1911.
4. Medical profession in its relation to the tuberculosis problem. New Mex. Med. Jour., Nov., 1912.
5. Rest and repair in pulmonary tuberculosis. Jour. A. M. A., Apr. 16, 1913.
6. Vital Statistics in Arizona. Ariz. Med. Jour., Jan., 1915.
7. Climate and its relative importance in the treatment of pulmonary tubrculosis. Interstate Med. Jour., 1914 or 1915.
8. Influence of climate as distinguished from fresh air in treatment of pulmonary tuberculosis and its complications. Amer. Rev. Tuberc., June, 1920.
9. Medical technic and its practical application in examination of lungs. Trans. Sect. Prac. of Med., A. M. A., 1922.
10. Artificial pneumothorax in treatment of pulmonary tuberculosis. Southwest Med., Jan., 1923. (with W. E. McWhirt and J. H. Allen.)
11. Allergy and immunity in tuberculous infection. Southwest Med., Apr., 1926.
12. Study of differential blood count in 1,000 cases of active tuberculosis. Ann. Int. Med., Jan., 1929.
13. Leucocytic picture of blood as aid in prognosis and treatment of pulmonary tuberculosis. Am. Rev. Tuberc., Sept., 1929. (with R. S. Flinn.)
14. Prevention of tuberculosis. Southwest Med., Nov., 1929.
15. Pneumoconiosis. Southwest Med., July, 1930. (with R. S. Flinn.)
16. Differential blood count as index of underlying pathological processes in tuberculosis. Nat. Tuberc. Assn. Trans., 1930.
17. Specific Treatment of Pulmonary Tuberculosis. Southwest Med., July, 1931.
18. Correlation of blood counts in 150 clinical cases of tuberculosis and underlying pathological changes as shown by serial x-ray films. Am. Rev. Tuberc., May, 1933. (with R. S. and Z. M. Flinn.)
19. Tissue reactions to tubercle bacillus. Southwest Med., Jan., 1933. (with Z. M. Flinn.)
20. Treatment of bone and joint tuberculosis. Southwest Med., July, 1933. (with R. S. and Z. M. Flinn.)
21. Bronchomoniliasis (preliminary report). Southwest Med., June, 1935. (with R. S. and Z. M. Flinn.)
22. Study of nine cases of bronchomoniliasis. Ann. Int. Med., June, 1935. (with R. S. and Z. M. Flinn.)
23. Calcium metabolism and its role in healing of diseased and injured tissues. Southwest Med., Sept., 1935.
24. Bronchomoniliasis. J. Trop. Med., Oct. 15, 1937. (with R. S. Flinn.)
25. Selective extrafascial pneumothorax; preliminary study. Southwest Med., June, 1938. (with J. H. Allen.)
26. The history and causes of silicosis. Ariz. Med., May-June, 1944.

EVOLUTION OF MICHIGAN MEDICAL SERVICE

JAY C. KETCHUM
Detroit, Michigan

It is perfectly natural for the doctors of any state or locality to be subject to initial doubts and misgivings when they confront the launching of a prepayment program for medical care, but it now can be said that most of these apprehensions are groundless.

Medical service plans will work. They will work to the eminent satisfaction of profession and public alike. If there is any one set of facts that has been established during the last five years, it is that a professionally-sponsored program of this type is wholly practical, is equally beneficial to doctors and patients and is eagerly accepted by the public.

I make these statements on the basis of the experience of the Michigan Medical Service, which is here set forth as the case history of an enterprise conceived in uncertainty and subjected to more than its share of growing pains, but now arrived at a lusty and promising young maturity.

Today Michigan Medical Service has accumulated experience which we sincerely hope will assist other state and county medical societies in embarking upon similar projects with the certainty of sound and orderly development. Michigan Medical Service has enrolled 693,170 subscribers, or one out of every eight persons throughout the state. It has paid some $8,665,000 for services rendered in 235,000 cases. It is continuing to grow with great rapidity.

It has, in other words, achieved in four and a half years a position that would be considered a resounding success in the business world. But it was not always so. The doctors of Michigan doubted, first, that the people wanted such a program. They wondered if it wouldn't bring in socialized medicine by the back door. They felt, some of them, that medicine should not concern itself with purely economic questions. They seriously questioned the advisability of a program developed on a service rather than a cash indemnity basis. They were puzzled by the problem of relationships with hospital service plans.

They didn't know, further, what income limits to establish in their plan, or how to ascertain subscriber eligibility, or whether to enforce the limits. They debated the question of complete versus limited coverage. And when it came to determining both charges to subscribers and fees to physicians they necessarily invaded an untrammeled wilderness.

The wonder is that out of this immense perplexity there came anything tangible at all. It is an even greater wonder that the Michigan program managed to survive its beginning years.

In March of 1940, nonetheless, there was introduced the prepayment medical care plan known as

"Michigan Medical Service"—a non-profit organization directly sponsored by the Michigan State Medical Society. Standard principles of group insurance were utilized in the program, which proposed to enroll subscribers in groups, each subscriber contributing a certain monthly payment and receiving in return the services of the doctor whenever needed.

The original proposition was to make the new project a "service" rather than a cash indemnity affair. By that it was meant that the subscriber would simply show his membership card to the participating doctor, who had agreed in advance to furnish his services without any direct charge to the subscriber. The physician received a standard fee for each type of service directly from the Michigan Medical Service.

Obviously, the plan was slanted to low-income groups. The income limits for subscribers were established at an annual average of $2,000 for unmarried persons and $2,500 for the enrol ed family. Michigan Medical payments to physicians were based on what was felt to be a fair charge for services to this income class.

But once the Michigan Medical Service sales or "enrollment" representatives entered the field, it was found that the income limits could not be made to stick. The married man who earned $2 600 resented the fact that he could not join the plan. Employers who were asked to cooperate by making payroll deductions likewise balked, insisting that they had no interest in a program which was not equally available to all their employees.

One of the first major compromises thus resulted early in the history of Michigan Medical Service. It was decided to retain the "full service" provision for employees within the established income limits, but also to permit higher income employees to enroll with the understanding that the participating doctor retained the right to make a charge to the subscriber in addition to the fee he received from Michigan Medical Service. This policy has been continued to the present, with reasonably satisfactory results.

Meanwhile, Michigan Medical Service quickly found that it has been overly ambitious in endeavoring to provide complete coverage of all the physician's services in the home, his office, or the hospital. For this complete program a schedule of monthly charges to subscribers had been established at $2.00 for the single subscriber, $3.50 for the husband and wife, and $4.50 for the full family.

These rates were reached by doubling the average use of the doctor's services and adding a charge for overhead—but they were scarcely half high enough. During the twenty-seven months that the complete medical program was in operation, the monthly income per subscriber averaged $2.61, or a loss of $1.23 per subscriber per month.

Moreover, the public wasn't ready to pay even these "half-cost" charges. The highest enrollment in the complete plan was 7,375 subscribers, the average slightly less than 4,000.

Side by side with the complete medical program, however, Michigan Medical Service has been offering limited protection providing only for surgery to subscribers who became bed patients in the hospital. Logic supports this limited protection as the type which would be most urgently desired by the public, since it provides for catastrophic health situations—the surgical cases which most commonly run to heavy expense.

During the same twenty-seven months that the complete medical program reached a maximum of 7,375 subscribers, the surgical p'an enrolled more than 350,000 subscribers. But again, rates which had been set too low resulted in financial difficulties. The initial monthly charges for the surgical plan were 40 cents, $1.20 and $2.00. Instead of the average of forty operations per thousand persons per year which prevailed for the entire population, the average at one time rose as high as 160 operations per thousand Michigan Medical Service subscribers annually.

For two years and more Michigan Medical Service struggled with a financial situation which threatened its collapse almost at any moment. It took another two years, and two increases in subscriber charges, to achieve the excellent financial position which prevails today.

With the complete medical plan no longer in operation, charges to subscribers for the surgical program now are 60 cents, $1.60 and $2.25 per month. A sliding scale increases the charge up to 90 cents monthly for subscribers in groups having a high percentage of female employees. Moreover. Michigan Medical Service insists on enrollment of 75 per cent of the employees of any company, thus insuring a representative group which is unlikely to have a disproportionate share of sickly members in need of surgery.

With the proper sales techniques, there is little difficulty in obtaining this percentage. Actually, it has been necessary to restrain the growth of Michigan Medical Service so that the usual high incidence of surgery in new "unseasoned" groups could be comfortably assimilated. One point which the plan has demonstrated beyond question is that there is public demand for a program of this sort.

Most doctors probably are already familiar with the national polls showing a heavy majority of the population in favor of a federal health insurance program. Proposals such as the Wagner-Murray-Dingell Bill clearly stem from this public demand. Equally clear is the point that some such proposal will inevitably be enacted into law unless the public demand is met in some other way.

That "some other way" has been found in Michigan, according to a factual objective survey just completed by the Michigan Health Council. Whereas the "Fortune" Poll of 1942 showed 75 per cent of the people nationally favoring federal health insurance, and the Gallup Poll of last year showed

nearly 60 per cent similarly disposed, the Michigan Health Council survey demonstrated that only 39 per cent of the Michigan population wants "some sort of a government-operated, medical-hospital plan."

The obvious conclusion to be drawn from Michigan's variation from the national sentiment is that the people prefer to have the doctors rather than the government sponsor a prepayment program. This conclusion was further supported in the Michigan study when, after having been asked bluntly and without option whether or not they wanted a federal program, the people were asked what sort of a plan they would prefer if they had a choice.

Given five possible methods of payment for medical service, the Michigan population voted overwhelmingly in favor of a voluntary, professional plan drew a 33.5 per cent vote, against a mere 11.5 per cent for a government plan. Regular insurance received a 13.4 per cent vote, a union plan a .9 per cent vote, and payment for illness as it arises a 2616 per cent vote.

This is the answer to the question as to whether doctors should concern themselves with medical economics. They should if they wish to meet the plainly-delineated desires of the public. They must if there is not to be compulsory federal medicine.

I believe that the not uncommon feeling that such a plan as Michigan Medical Service provides back-door entry to "socialized medicine" is dissi pated by a little thought about the nature of the plan. All the plan does is to enroll members, collect their payments, and pay the physicians.

It does nothing to interfere with the doctor-patient relationship. It exercises no control over doctors, for even the doctor's participating agreement is a contract with the subscribers rather than with the plan itself. Nor does Michigan Medical Service have anything to do with setting the fees paid for medical services. These fees are determined by committees of the doctors themselves. Finally, the plan is under the doctor's control in any event, for it is their own program and is operated as they want it to be operated.

From the start it was the feeling of the medical men who led in the establishment of Michigan Medical Service that the program would be as beneficial to the profession as to the public. Four and a half years of operation have borne out this belief. For that portion of his fees which is the obligation of the plan, the doctor has no uncollected or uncollectable items. On the average, he is paid within two weeks after his statement reaches the plan. He need not delay needed surgery for plan subscribers because they are hard-pressed for money. Even if he is a general practitioner rather than a surgeon, he usually shares in the plan's payments. Sixty-five per cent of the money paid out by Michigan Medical Service, which at present is exclusively a surgical program' goes to the general practitioners of the state.

So far as the public of Michigan is concerned, the surgical care plan of Michigan Medical Service and the Blue Cross hospital care plan of the Michigan Hospital Service are "one package." Internally, Michigan Medical Service and Michigan Hospital Service are separate corporations, dealing with their respective professions. But the subscriber is enrolled in both programs simultaneously; he makes a single payment which is then apportioned between the two plans; he has a single membership card which he shows to both the doctor and the hospital when he needs service.

It is almost mandatory to present this unified front to the public if the plans are to succeed. Neither employers nor employees will be bothered with signing and paying for two separate services in what they consider to be the same field. It is equally desirable from the plan economy standpoint to eliminate excessive duplication by maintaining a joint record system.

It is one of the fine traditions of medicine to examine every new technique or procedure microscopically, to begin by "tearing it apart" in search of flaws. In medicine, imperfections are likely to result in widespread catastrophe. Michigan Medical Service has been subjected as fully as any new medical technique to this type of critical searching analysis on the part of medical men throughout the state. But medical tradition also embraces the most rapid utilization of new procedures once they have been proved. It is naturally our feeling that the prepayment procedure utilized by Michigan Medical Service and its companion medical service plans now has been proved beyond any reasonable doubt.

Reprinted from the Journal of the Indiana State Medical Association, November, 1944.

TREATMENT OF SCARLET FEVER

MAX J. FOX and NORVAN F. GORDAN
Milwaukee, Wisconsin

Arch. Int. Med., 74:1-3, July, 1944

Scarlet fever is now treated in three ways: chemotherapy with the sulfa drugs, with commercial antitoxin, and with convalescent serum, of which the last gives the best results. Cases of scarlet fever, in one hospital from 1937 to 1943, of 7,500 patients, were studied. Human convalescent serum had been administered to 1,000 of these patients. A group of 1,000 other cases seen before 1923, when none of these three treatments was available, was used as a control series. The 1,000 patients of the latter group as a whole were more seriously ill than the control group, for all of them had to be treated with convalescent serum.

In the serum-treated group, pyrexia lasted for an average of two and one-half days, but in the control group the average had been five and five-tenths days. The disease itself had an average duration of twenty-four and five-tenths days in the serum-treated patients and, in the control

series, forty-three and five-tenths days. There were 17 deaths in the former and 20 in the latter. Only 8.8 per cent failed to respond to serum therapy, and 83 per cent showed rapid improvement in sore throat and rash; 8.2 per cent improved after a second administration of serum.

During the six years that convalescent serum was given, the dosage was materially lessened. Small doses were as effective as larger ones, especially if given early. Sulfonamides are ineffective in treatment of scarlet fever but valuable in treating complications, as shown in an earlier study. Likewise, commercial antitoxin may be used to overcome toxic effects of scarlet fever but is not advised because foreign protein reactions may result. The conclusions drawn are that administration of pooled human convalescent serum shortens the duration of pyrexia, lessens complications and decreases the death rate.

(Reprinted from the Quarterly Review of Medicine, Nov. 1944.)

ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

Directory

ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892
423 HEARD BUILDING, PHOENIX, ARIZONA

OFFICERS AND COUNCIL

Dan L. Mahoney, M. D. (1948)—Tucson
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Charles P. Austin, M. D. (1949)—Morenci
President-Elect
Walter Brazie, M. D. (1945)—Kingman
Vice-President
Frank J. Milloy, M. D. (1945)—Phoenix
Secretary
C. E. Yount, M. D. (1945)—Prescott
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Speaker of the House
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Delegate to A.M.A.
D. F. Harbridge, M. D. (1945)—Phoenix
Chairman, Medical Defense

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Robert S. Flinn, M. D. (1947)—Phoenix
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E. Payne Palmer, M. D. (1946)—Phoenix
Hal W. Rice, M. D. (1945) *—Bisbee
O. E. Utzinger, M. D. (1947)—Ray
*Serving unexpired term of W. Paul Holbrook in Service.

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Scientific

Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.

Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

Scientific Assembly—Charles P. Austin President-elect and Chairman (1945), Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

Scientific Education and Postgraduate Activities—A. H. Dysterheft (1946), McNary; A. I. Podolsky (1947, Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

PRESIDENT'S MESSAGE

My message this month will include comments on the Annual Meeting and on current legislative procedures. The message will be brief as both subjects are covered on other pages of this Organization Section of our Journal.

As you know by now, *the Annual Meeting has been cancelled* by edict of Washington through the Office of Defense Transportation. A MEETING OF THE COUNCIL AND HOUSE WILL BE HELD ON SATURDAY, APRIL 28, AS LESS THAN 50 WILL BE IN ATTENDANCE AND THE MEETING IS THEREFORE IN ORDER. All delegates and Council members will be notified soon as to the place for these business sessions—whether at Tucson as originally planned or at Phoenix. As we go to press we do not have this informa-

tion as we are canvassing those who will attend to learn their choice of meeting place.*

As to legislative procedures, you know that the Legislature has been in biennial session since early January with adjournment in order on March 8. You will find a review of our legislative activities on other pages of this section. We are grateful, indeed, for the outcome of the efforts of the Association to maintain qualifications on a high plane for all those practicing the healing arts in Arizona and with equal fairness to all practitioners in all branches. The Senate and the House of this Seventeenth Legislature have demonstrated by their vote that they are with the medical profession and organization in continuing high professional standards for those treating the sick and injured of this state. This is as it should be if the health interests of the people of the state are to be served properly. Look up your local Senators and Representatives when they come home at the conclusion of this session and express your personal thanks to them for their fair-minded support of health legislation.

Dan L. Mahoney

President.

* Tucson will be the meeting place for Council and House.

REPORT ON LEGISLATION

Long before the *Seventeenth Legislature* convened in early January the Association knew that efforts would be made to repeal the Basic Science Law of Arizona. Radio programs, sponsored by the **Associated Chiropractors of Arizona,** had been on the air (KOY) three times weekly for a long period of time attacking repeal. **The Arizona Daily Star (Tucson),** prior to and during the legislative session, waged an editorial campaign against the law and against the medical profession. There was a marked similarity of propaganda from these two vociferous opponents.

The Association had been prepared for several seasons past to seek an amendment to the Basic Science act granting reciprocity with other states having a similar law. Each legislative session saw other health matters before the legislature for their consideration and the time was said to be inopportune for seeking additional legislation. This session, with no health matters having a prior right with the legislature, the Association offered its bill to amend the law and grant this reciprocity. *Senate Bill No. 68* was therefore introduced to amend the law as described. Senator Norman Fain of Yavapai (Prescott) introduced the bill for the Association. Laws of other states had been carefully studied and the amendment offered was similar to those of the other states.

As a counter measure Senator Hubert H. d'Autremont of Pima County (Tucson) introduced Senate Bill No. 43. His bill would have made the Basic Science law worthless. In addition, the House threw in House Bill No. 125 for the purpose of repealing the Basic Science Law in its entirety. Representative F. W. Timmerman of Maricopa County (Phoenix) introduced this bill 'by request'. Strong support for the opposition immediately arose. The Association followed its usual procedure of laying facts before the Legislature by means of

prepared material and by calling on all county medical societies to lay the same facts before the legislators of their respective counties and communities. Physicians knowing certain legislators personally also gave the same support Our membership and societies responded and THE LEGISLATURE ALSO RESPONDED TO THIS PROGRAM OF FACTS BY ENACTING SENATE BILL NO. 68 AS INTRODUCED WITH BUT ONE MINOR AMENDMENT.

The Association has nothing but praise for the legislative branches in their deliberations. The end results prove that the majority of the House and Senate (there were no dissenting votes in either branch on final votes) accepted the truth as it was laid before them, and little difficulty was experienced in securing the final enactment of Senate Bill No. 68 and the defeat of Senate Bill No. 43. House Bill 125 was shelved and did not come out for vote.

In addition to the Basic Science amendment, the Association sponsored an amendment to the *Medical Practice Act* eliminating the osteopath from that Board and creating a board of five physicians and surgeons of medicine. The Osteopathic Association also desired this amendment as they have had their own board since the enactment of their law. Senator Norman Fain of Yavapai County and Senator William F. Kimball of Pima County (Tucson) introduced *Senate Bill No. 59* which would so amend the Medical Practice Act. As we go to press, the Senate has unanimously passed this bill and the House promises its vote before adjournment.

Following is the amendment to the Basic Science Law which will go into effect 90 days after the Governor approves and signs the same:

"AN APPLICANT, A CITIZEN OF THE UNITED STATES, FURNISHING SATISFACTORY PROOF OF CERTIFICATION, REGISRATION, OR LICENSE ISSUED TO SUCH APPLICANT WITHIN ANY STATE OR TERRITORY OF THE UNITED STATES IN WHICH REQUIREMENTS FOR THE SAID APPLICANT AT THE DATE OF THIS LICENSE SHALL BE DEEMED BY THE BOARD TO BE EQUIVALENT TO THOSE OF ARIZONA, SHALL BE ELIGIBLE FOR REGISTRATION BY RECIPROCAL ENDORSEMENT AT THE DISCRETION OF THE BOARD, UPON PAYMENT OF THE REGISTRATION FEE PRESCRIBED IN SECTION 67-206."

Through the columns of this Journal, the Arizona Medical Association wishes to express its appreciation to Senator Norman Fain of Yavapai County and to Representatives N. S. McCallum of Yuma County (Yuma) and A. Berky of Pima County (Tucson) for their tireless leadership in their respective chambers. To the

Legislature as a whole goes a similar vote of thanks. Their support was strong in behalf of the health interests of the people in the state, and the final vote of both legislative bodies is gratifying indeed to the medical organization of the state in its policy of supporting sound health legislation for the people of the state and in seeing that only the best trained practitioners in the various healing arts are made available to treat them when sick or injured.

THANK YOU, SEVENTEENTH LEGISLATURE, IN BEHALF OF THE PEOPLE YOU ARE REPRESENTING!

President Dan L. Mahoney, Tucson
Secretary Frank J. Milloy, Phoenix
Chairman of Council George O. Bassett, Prescott

Committee on Public Policy and Legislation:
Jesse D. Hamer, Phoenix
Charles A. Thomas, Tucson
Walter Brazie, Kingman

Staff Meetings

GILA COUNTY MEDICAL SOCIETY

January 23rd, 1945

(This meeting was a dinner party given by Host and Hostess Dr. Clarence Gunter and wife of Globe, Arizona. Dr. Gunter was the retiring president of the Gila County Medical Society. This social affair was honoring the doctors and their wives of the Gila County Medical Society and was heartily enjoyed by all. Those present were: Dr. and Mrs. Cyril M. Cron, Dr. and Mrs. Clarence Gunter, Dr. and Mrs. Nelson D. Brayton, Dr. and Mrs. T. C. Harper, Dr. and Mrs. A. J. Bosse, Dr. and Mrs. Russell R. Noice, Dr. and Mrs. Marcus G. Kelly, Dr. and Mrs. Ira E. Harris. Special guests were: Mr. and Mrs. George Evans, Dr. and Mrs. C. R. Swackhamer of Superior.)

Minutes of the preceding meeting were read and approved.

No business arising out of the minutes.

No new business.

No special communications.

Report of secretary-treasurer showed five dollars and fifty-five cents in the treasury.

Nomination of officers for the ensuing year then occurred and elections were as follows:

President—Dr. Russell R. Noice of Miami
Vice-President—Dr. T. C. Harper of Globe
Secretary-Treasurer—Dr. Nelson D. Brayton of Miami (re-elected)

Censors—Term expires Dec. 31, 1948—Dr. A. J. Bosse
Other Censors—Term expires Dec. 31, 1945—Dr. Ira E. Harris
Term expires Dec. 31, 1946—Dr. Russell R. Noice.

NELSON D. BRAYTON, Sec.

PIMA COUNTY MEDICAL SOCIETY

Tucson, Arizona
January 6, 1945

Scientific Program

1. "Peritoneoscopy"
 Dr. N. K. Thomas
2. "Basic Science Law"
 Dr. V. M. Gore

Following is the list of officers elected January 9th, 1945, for this year:

President—Dr. A. L. Lindberg
Vice-President—Dr. George L. Dixon
Sec'y.-Treas.—Dr. Donald F. Hill
Censor—Dr. V. M. Gore
Delegates—Dr. Meade Clyne
Dr. C. S. Kibler
Dr. V. A. Smelker
Dr. E. M. Hayden
Alternates—Dr. C. A. Thomas
Dr. Benson Bloom
Dr. Roy W. Rudolph
Dr. Ed. J. Gotthelf.

Dr. W. Brooks Steen who has been stationed in Gulfport, Mississippi, practically ever since he entered the Armed Forces, has been transferred to Lake Charles Army Air Field, Lake Charles, Louisiana, and made Chief of the Medical Service there.

MARICOPA COUNTY MEDICAL SOCIETY
Monday Evening, February 5, 1945

Scientific Program

"Wound Healing"
Dr. John W. Dulin, Associate Professor of Surgery, University of Iowa.

ST. MONICA HOSPITAL, PHOENIX

Scientific Program

1. Review of Autopsies:
 Dr. Maurice Rosenthal.
2. Acute Abdominal Crisis of an Adolescent due to rare cause:
 Presented by Dr. Louis Baldwin.
 Discussion by Dr. James Ovens.
3. Massive Juvenile Hypertrophy of the Breasts.
 Presented by Karl S. Harris.

ST. MARY'S HOSPITAL, TUCSON
January 16, 1945

Scientific Program

Chairman—Dr. J. H. Woodard

1. Pregnancy, complicated by Nephrosclerosis and Hypertension.
 Dr. R. K. Hausmann.
2. Pulmonary Abscess.
 Dr. C. S. Kibler.
3. Possible Aplastic Anemia. Case for diagnosis.
 Dr. S. J. Grauman.

ANNUAL MEETING CANCELLED

By request of the Office of Defense Transportation, Washington, D. C., the Annual Meeting of the Arizona Medical Association for April 27-28, 1945 has been cancelled.

This action was taken by the Office of Defense Transportation pursuant to an application from our Council to hold the meeting as scheduled. It was the opinion of the Council that the session was in the war effort in that the papers to be presented would bring to the physicians of this state the latest information on war-borne diseases. By directive of February 8, the ODT has ruled otherwise and the meeting is now cancelled.

The Council and House will convene at Tucson, Santa Rita Hotel, April 28. The Council at 10:00 A. M. The House at 2:00 P. M.

Make Your Reservations Now.

SIGNED,

CHARLES P. AUSTIN, M. D., Chairman
Committee on Scientific Assembly

DRS.: G. F. MANNING, FRANK J. MILLOY,
ROYAL W. RUDOLPH, GEORGE HESS,
Members

Clinical Pathological Conferences

ST. JOSEPH'S STAFF MEETING
APRIL 10, 1944

The case is that of a Mexican boy, 12 years old, who entered the hospital because of nose bleed, melena, vomiting, hemorrhagic spots on the hands and legs. He had been unconscious for the past 24 hours. He was perfectly well until two weeks ago, when he began to break out with small red spots up to three-quarters of an inch in diameter, which broke down, discharging pure blood. Five days ago, his nose started to bleed; three days later, bright blood was noted in the stools. His nose was packed yesterday and he started to bleed from the mouth. A day or two before admittance he started to vomit, complained of headache in the frontal and occipital regions and gradually became unconscious, being drowsy at first and able to talk a little, but later became completely comatose. His arms and legs have been twitching some—about the same on each side.

Past history reveals no illness at all; was stung by a scorpion three years before and was very sick as a result—otherwise in very good health. Father and mother are living and well and there are six siblings all living and well. There is no history of familial disease.

His blood pressure is 120 systolic; 40 diastolic. Temperature 103, pulse 84, right pupil is widely dilated; the left appears normal. Neck shows no glandular enlargement or stiffness. The lungs are clear; the pulse is irregular in rate and volume; the heart is not enlarged nor are there murmurs or extra beats. The abdomen is soft, no masses present. The legs are covered with purple spots up to an inch in diameter; some have crusts. Sensation of all sorts was missing and the muscle tone was less on the right side. Reflexes of the lower extremities were absent on the right side and varied in response on the left side.

Hemoglobin, 49%; red count, 2.5; white count, 18,150; coagulation, 3 min. 50 sec. bleeding time, 11 min. 20 sec. Anisocytosis and poikilocytosis were marked. 1 normoblast; 7 small lymphocytes and 93 neutrophiles. Non filaments 15%; plattelet count 170,000. Kahn and Wasserman negative.

After being put to bed, the pulse began to increase, breathing became more difficult, dropping to 10 per minute; pupils became dilated and a few convulsions were noted. The pulse gradually increased in rate to about 180, respirations gradually decreased and the patient expired.

The following conditions were mentioned in the general discussion of the case:

1. Fulminating, Idiopathic Purpura Hemorrhagica.
2. Aplastic Anemia.
3. Aleukemic Leukemia.
4. General Sepsis.

Discussion

DR. TERESA MORAN:

This case shows a marked hemorrhage in practically all the organs of the body. There was no evidence found at autopsy of a septic process. The endocardium was normal. No endocarditis was seen. The valves were normal in appearance. The spleen was definitely increased in size and shows a picture which is associated with Purpura hemorrhagica, that is the infiltration of the splenic cords by blood cells. No evidence of leukemia was found. (The bone marrow studies will be made after decalcification.) The entire picture is that of a purpura hemorrhagica which is essential in type. There is no etiological factor found.

Anatomical Diagnosis

1. Thrombocytopenic purpura with
 a. Generalized purpura.
 b. Cerebral hemorrhages.
 c. Myocardial hemorrhage.
2. Cerebral edema.
3. Edema and hemorrhage, left orbital cavity.
4. Abdominal and G. I. hemorrhages.
5. Pulmonary hemorrhage.

MEDICO-LEGAL SECTION

IN THE SUPREME COURT OF THE STATE OF ARIZONA

This is an accident that resulted in hernia to the respondent, Fred Meier. The accident, which is the subject of this action, occurred on or about the 13th day of July, 1942, and on said date while he was loading meat at the Arizona Grocery warehouse, and while carrying heavy cases onto the truck, Meier slipped and strained himself. He felt a pain in the region of the groin but never thought much about it and continued to work that day. There was some swelling that night and the next day but he didn't know what it was. Meier stated that about a week after that he told his foreman, A. G. Bacon, about the incident. Bacon testified, when asked how long a time had elapsed before Meier told him, "it might have been a week or ten days, or maybe two or three days." Of Meier's own accord he purchased a truss of the Southwest Surgical Supply Company in Phoenix, and wore the same for about

(Continued on page 124)

Medical
QUARTER HOUR

The Association Radio Baoadcast
Now on the Air

Each Monday at 6:15 P.M.
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5. MENTAL HEALTH: Juless Masserman, M.D., University of Chicago.
6. HEART DISEASE: Edwin P. Jordan, M. D., Assistant Editor, JOURNAL of the A.M.A., W. W. Bauer, M. D.
7. CANCER: Maude Slye, M.D., University of Chicago; Max Cutler, M.D., Chicago Tumor Institute; Frank L. Rector, Michigan Department of Health.
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11. ARTHRITIS: Ernest E. Irons, M.D., University of Illinois.
12. SAFETY: Ned H. Dearborn, National Safety Council; Carl M. Peterson, M.D., W. W. Bauer, M.D.
13. LIVING SUCCESSFULLY: Morris Fishbein. M.D., Editor, JOURNAL A.M.A.

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Transcribed interviews with Dr. W. W. Bauer of Chicago. Series for June 25 through September 10, 1945.

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3. SAFETY IN SWIMMING.
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5. HEAT AND SUN.
6. INSECTS.
7. POISON OAK OR IVY.
8. KEEPING COOL.
9. LIGHT SUMMER MEALS.
10. PICNIC LUNCHES.
11. HIKING.
12. HAY FEVER TIME.

(Continued from page 121)

two weeks and then purchased another one from the Arizona Brace Shop, and it seems as though a statement for the second purchase was dated August 5, 1942.

The records before us show that a report of hernia was made to the Industrial Commission of Arizona by a typewritten report. The report was dated the 13th day of July, 1943. In that report, however, there was a statement under "Remarks" by Meier to the effect: "I finally decided that it was something that should be looked after and so I went to Dr. Kober on July 6th, 1943. I kept working because most of the time the trouble was not very painful. I tried to wear a truss and that made it hurt and so I quit wearing or trying to wear a truss. I bought two trusses with my own money."

The Industrial Commission, after hearings, entered its award and findings for Meier, and after denial of rehearsing filed by petitioners herein, the case has been brought to us on a writ of Certiorari.

It is the contention of the petitioner herein that somewhere around the 9th, 10th or thereabouts in July, 1942, respondent Fred Meier sustained the injury complained of but that he made no report to his company nor to a physician nor did he file a claim with the Industrial Commission for a period of more than one year thereafter.

It would seem from the facts in the case that more than a year had elapsed from the time of the injury until the claim was filed or a doctor was consulted on the subject. The respondent Meier, however, did some few days after the injury report to his foreman, A .C. Bacon, and Bacon testified that he failed to turn in the report to his company.

This is a case where Meier continued to work, and still continues to work, for the petitioner and from a statement from counsel on both sides in open court he has proved to be an excellent employee and evidently his services are well liked. It is the claim of Meier that he failed to report the injury because it was minor. He testified at the time he slipped, the slipping causing the injury while he was carrying a load, that something had occurred to him, but did not consider it at all serious, and later on bought a truss, and thereafter bought two more with his own means, and it was not until July 6, 1943, according to the claim that he filed with the Industrial Commission, that he went to Dr. Kober and reported his accident and gave information concerning same. He went to the Industrial Commission on July 13, 1943,



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and filed a workman's claim for compensation and in that claim for compensation it was stated the date injury was sustained as about January 15, 1943.

It is evident to us that Meier was injured in July, 1942, and we can see no justification for the report of the Industrial Commission that he was injured in 1943. A close examination of the typewritten copy of that report, however, discloses that there was an erasure and very likely there was some confusion and there was inserted January 15, 1943, under the heading of "Date of Injury."

It is our holding in keeping with out statute that from the friendliness that existed between the employer and employee in this case, and the evident endeavor of the employee to keep on working and not report an injury unless it was really necessary, that such good faith was shown that it was within the province of the Industrial Commission of Arizona to invoke the statute of our state, Section 56-966, 1939, wherein it, in part, says:

> Whenever an accident occurs to an employee, the employee shall forthwith report such accident and the injury resulting therefrom to the employer, and any physician employed by such injured employee shall forthwith report such accident and the injury resulting therefrom to the employer and to the tion, if it believes after investigation, that commission. * * * but the commission may relieve said injured person or his dependents from such loss or forfeiture of compensa- the circumstances attending the failure on the part of the employee, or of his physician, to report said accident and injury are such as to have excused the said employee and his physician for such failure to so report."

The foregoing is in keeping with the case ofo Maryland Casualty Company v. Industrial Commission, 33 Ariz. 490, 266 Pac. 11, and also with the case of Hartford Accident, etc. Co. v. Industrial Commission, 43 Ariz. 50, 29 Pac. (2) 142. In the latter case a period from April 29, 1931 until May 11, 1933, elapsed between the date of injury and the date when the injured person filed his report and claim for compensation. And from that case we quote the following:

> "Petitioner urges that in Zagar v. Industrial Com., 40 Ariz. 479, 14 Pac. (2) 472, and in Doby x. Miami Trust Co., 40 Ariz. 490, 14 Pac. (2d) 476, this court construed section 1447, supra, as requiring the workman to file his claim with the Industrial Commission one year after the injury. In both of those cases the question was as to when an application fo ran increase or re-arrangement of compensation should be made, and any



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language used in those cases must be viewed in that light. What he said in those cases, however, in nowise conflicts with the construction of that section that we now adopt. We still hold that the claim must be filed within one year after the date of the injury if the injury is of sufficient magnitude to be compensable. But, if it is slight or trivial at the time and non-compensable and later on develops unexpected results for which the employee could not have been expected to make a claim and receive compensation, then the statute runs, not from the date of the accident, but from the date the results of the injury become manifest and compensable. * * *''

The brief of amicus curiae filed by Mr. C. Leo Guynn has given us a very exhaustive treatise on the mechanics of inguinal hernia, and while it has no assignment of error, it does present several propositions of law for which we are duly grateful.

We hold that this case was not of sufficient magnitude at its inception to be compensable. That as shown by the respondent in carrying on his work, the injury was at first slight or trivial and not then compensable, but that later he could see that it was important that he report it and file his claim for compensation.

We find that petitioners herein have in no respects been prejudiced by the delays in this action, and in all respects we find and hold that the Industrial Commission of Arizona, in performance of its statutory duties, has been just and fair in its award herein.

The award is affirmed.

R. C. STANFORD.

Book Reviews

TECHNIQUE OF THE STANDARD KAHN TEST AND OF SPECIAL KAHN PROCEDURES. By Reubin L. Kahn, Chief of Clinical Laboratories, University of Michigan Hospital, University of Michigan, Ann Arbor, Michigan, U.S.A., October, 1944. Published by University of Michigan Press; price $.25.

As the preface states, this paper is a revised and enlarged outline. ''The Kahn Test — A Practical Guide'' by the same author presents the subject in full form with elaborate discussions of the steps employed. Over-simplification has been avoided in the outline and the author has summarized with remarkable clarity the details or the various procedures. It is, of course, written particularly for pathologists and serological technicians.

Practicing physicians, however, should be interested in some of the procedures outlined by the author-serologist to give them better service. The entire space on the inside cover is utilized in a presentation of the proper method of

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collecting specimens—a subject too frequently taken for granted. Of particular significance also is the amount of space devoted to the subject of false positives and the newer Kahn procedures designed to evaluate them. New and interesting in this connection is the quantitative procedure employing 2.5% sodium chloride as the diluent instead of 0.9% salt solution. The "salt dispersion technique" and the "triple quantitative technique" employing serial dilutions made with distilled water, 0.9% sodium chloride and 2.5% sodium chloride also offer a new and promising approach to this perplexing problem.

The attention of the physician should be directed especially to the "request blank" of the University Hospital reprinted by Dr. Kahn as informative. Along with definitions and interpretations of the "general biologic" and "luetic" types of reactions, the following recommendation is given: "When repetition of the verification test is indicated, the intervals should be weeks instead of days." Also "The diagnosis of a false positive reaction often requires prolonged observation of a patient, and the test is intended to supplement, not to supplant, such observation."

The appendix of this paper attempts to outline for the technician the detailed procedures in the preparation and sensitivity adjustment of the Kahn antigen. Several new and helpful steps are included.

Robert L. Eaton, Sc. M., Pathological Laboratory, Phoenix, Arizona.

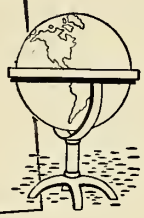
INTERN'S HANDBOOK. Under the direction of M. S. Dooley, A. B., M. D., Professor of Pharmacology, and Maynard E. Holmes, M. D., F.A.C.P., Professor of Clinical Medicine; by Members of the Faculty of the College of Medicine, Syracuse Univesity. Third edition. J. B. Lippincott Co. Price, $3.00.

This is a reference book containing brief and direct information for the busy physician and is especially adapted for the use of the intern in applying his hardl-won knowledge to bedside use.

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War, it is believed, is accentuating the nation's hearing problems. The din of battle and the roar of war production are affecting many ears. Noise is hard on the ears. This fact has been recognized for many years. Impaired hearing is common among ironworkers. and the condition has long been referred to as "boilermaker's deafness." Unlike the eye, whose iris can stop down the amount of light entering the eye, the ear has no control mechanism to filter out undesirable noises.

Rehabilitation programs are being set up by the government for returning veterans with impaired hearing, and industrial organizations are taking steps to provide jobs to men and women with hearing shortcomings, as well as other physical handicaps, according to the Sonotone research laboratories. The problem of impaired hearing also is receiving greater attention from educators and leaders in social and economic problems of adjustment faced by persons with impaired hearing.

Despite the prevalence of impaired hearing, it was not until recent years that the importance of the problem was fully realized. Development of modern, efficient, hearing aids has stimulatetd interest in the subject. The new aids are small in size, effective and adjustable to the particular requirements of the individual. However, many persons with impaired hearing, through ignorance or neglect, still fail to avail themselves of the aids provided by medorn electronic science. Years ago the same general situation existed in respect to eyeglasses. People were hesitant to wear spectacles; but now eye-

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glasses are used by millions of persons, young and old.

A similar change in habits will take place, it is believed, among the millions of persons with impaired hearing. It is estimated that less than one million hearing aids are in use in the United States, although statistics indicate that several times that number of persons should be receiving the benefits of such aids for better living. Indications are that during the postwar period of readjustment greater attention than ever before will be paid to the needs of the nation's hard-of-hearing.

HOW WE TALK

The human voice is the most versatile of the sound-producing devices and notwithstanding extensive efforts, its many shades of tone cannot be duplicated faithfully by mechanical means, according to the Sonotone research laboratories.

Human speech is created by vibration of the vocal chord, whose tone is modified by the tongue, teeth and lips. This process of modification is known as articulation. The importance of the tongue in forming speech is demonstrated easily by opening one's mouth, keeping the tongue motionless, and making sounds. With the tongue in this position you cannot talk. In whispering the flow of air from the lungs is too small to set the vocal chords in vibration and the speech sounds are produced entirely by articulation.

Some speech sounds, as "s" and "f", are produced without the vocal chords by the expulsion of the aid between the tongue and the roof of the mouth.

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Speech is learned through imitation of sounds which are heard. For this reason the ears have an important bearing upon speech. Voices of persons with failing hearing frequently undergo great modifications; in fact, changes in speech often are a sign of hearing impairment. Because of this close relationship between voice and hearing, speech correction often is an important part of hearing rehabilitation problems facing persons with impaired hearing.

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BOOK REVIEWS 200

Volume 2 *May, 1945* *Number 3*

The *Effectiveness* of ANTISYPHILITIC THERAPY



depends

not on disappearance of spirochetes alone



nor merely

the reversal of positive Wassermann reaction



but on

whether the treatment is such that within the shortest possible time the patient receives maximum protection against relapse and the infection of others.

PEOPLE who feel well balk at the idea of taking weekly injections, particularly if the injections are painful or make them feel ill. Therefore, once the early signs of syphilis disappear, many patients become indifferent to treatment. A recent survey shows that:

> ***only 1 out of 4 clinic patients with early syphilis, undergoing the standard 70-week course, continues treatment long enough to receive minimal protection against infectious relapse.***

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Sokolow and Chamberlain (Annals of Internal Medicine, February 1943) state:

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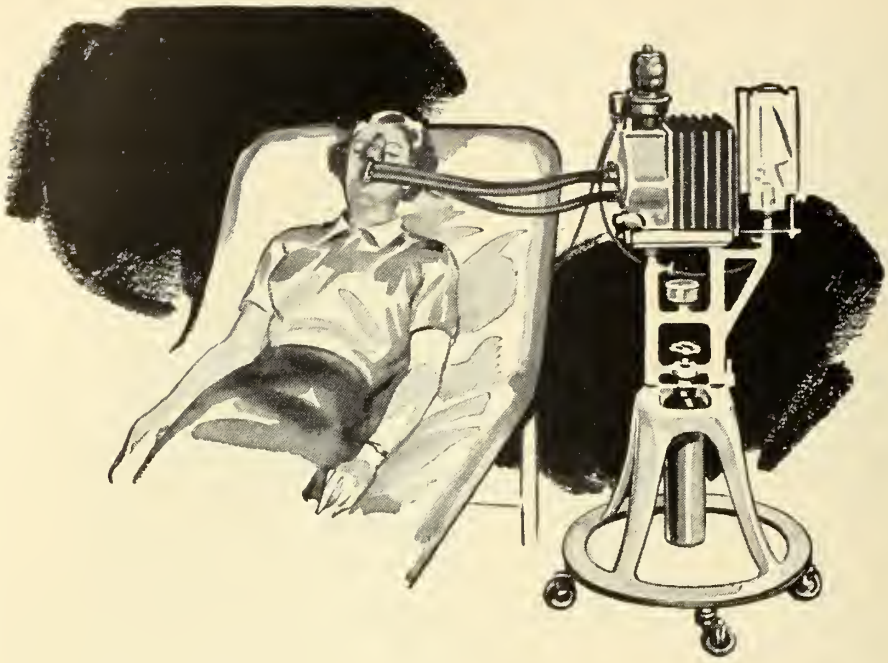
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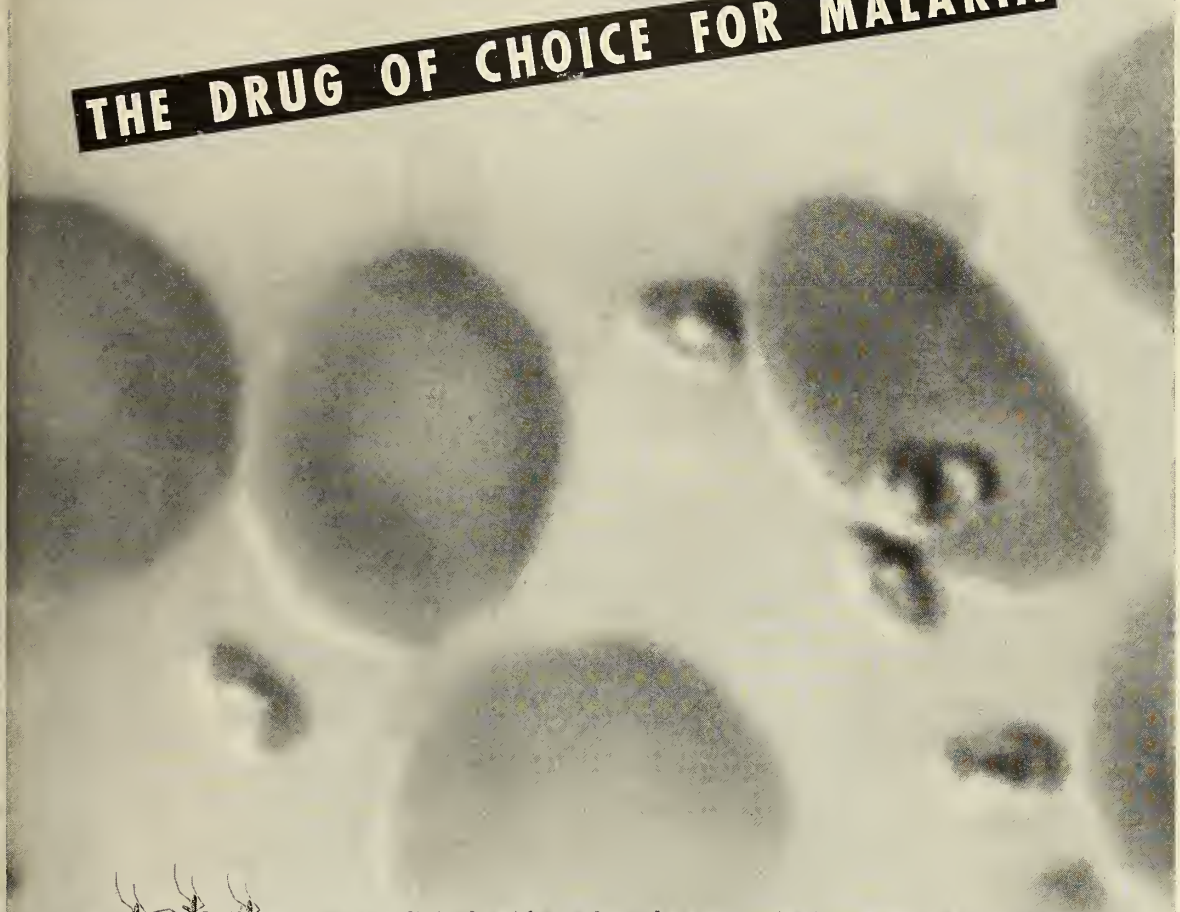
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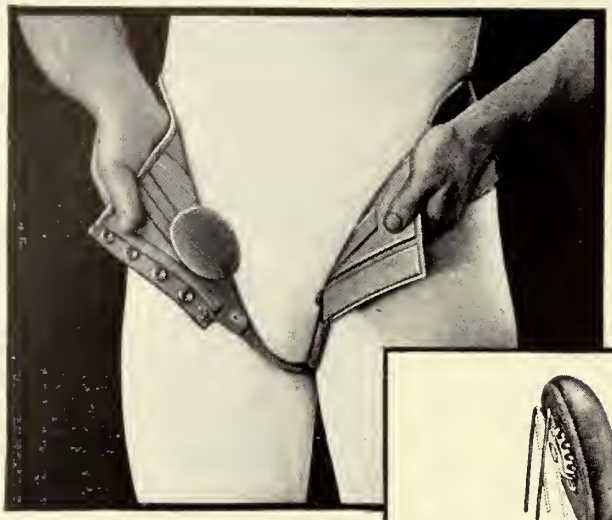
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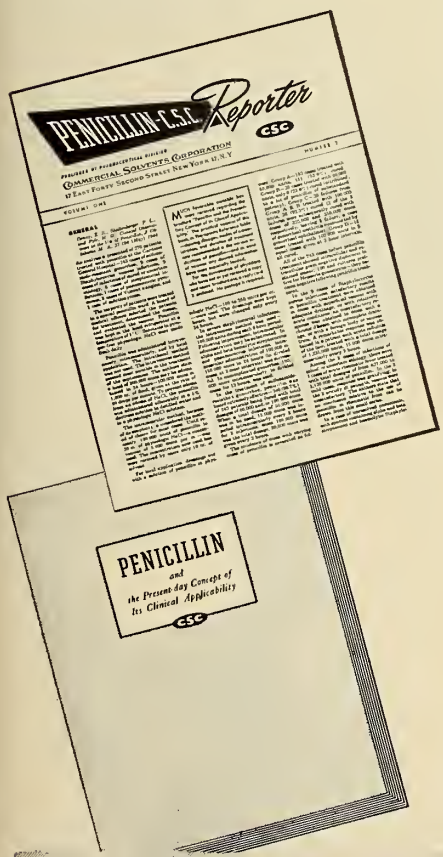
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*Collins, B. C.: Subacute Bacterial Endocarditis Treated with Penicillin, J.A.M.A. 126:233 (Sept. 23) 1944.

MacNeal, W. J.; Blevins, A., and Poindexter, C. A.: Clinical Arrest of Endocarditis Lenta by Penicillin, Am. Heart J. 28:669 (Nov.) 1944.

Zimmerman, S. L., and Barnett, R. N.: Case of Probable Meningococcus Endocarditis Apparently Cured with Penicillin, South. M. J. 37:694 (Dec.) 1944.

Herrell, W. E., and Kennedy, R. L. J.: Penicillin: Its Use in Pediatrics, J. Pediat. 25:505 (Dec.) 1944.

Dawson, M. H., and Hunter, T. H.: The Treatment of Subacute Bacterial Endocarditis with Penicillin, J.A.M.A. 127:129 (Jan. 20) 1945.

Nahum, L. H., and Doff, S. D.: Recent Advances in the Treatment of Heart Disease, Connecticut M. J. 9:3 (Jan.) 1945.

Poindexter, C. A.: The Use of Penicillin in the Treatment of Subacute Bacterial Endocarditis, reproduced by permission of the American Heart Association in J. Arkansas M. Soc. 41:165 (Jan.) 1945.

White, P. D.; Mathews, M. W., and Evans, E.: Notes on the Treatment of Subacute Bacterial Endocarditis Encountered in 88 Cases at the Massachusetts General Hospital During the Six Year Period 1939 to 1944 (Inclusive), Ann. Int. Med. 22:61 (Jan.) 1945.

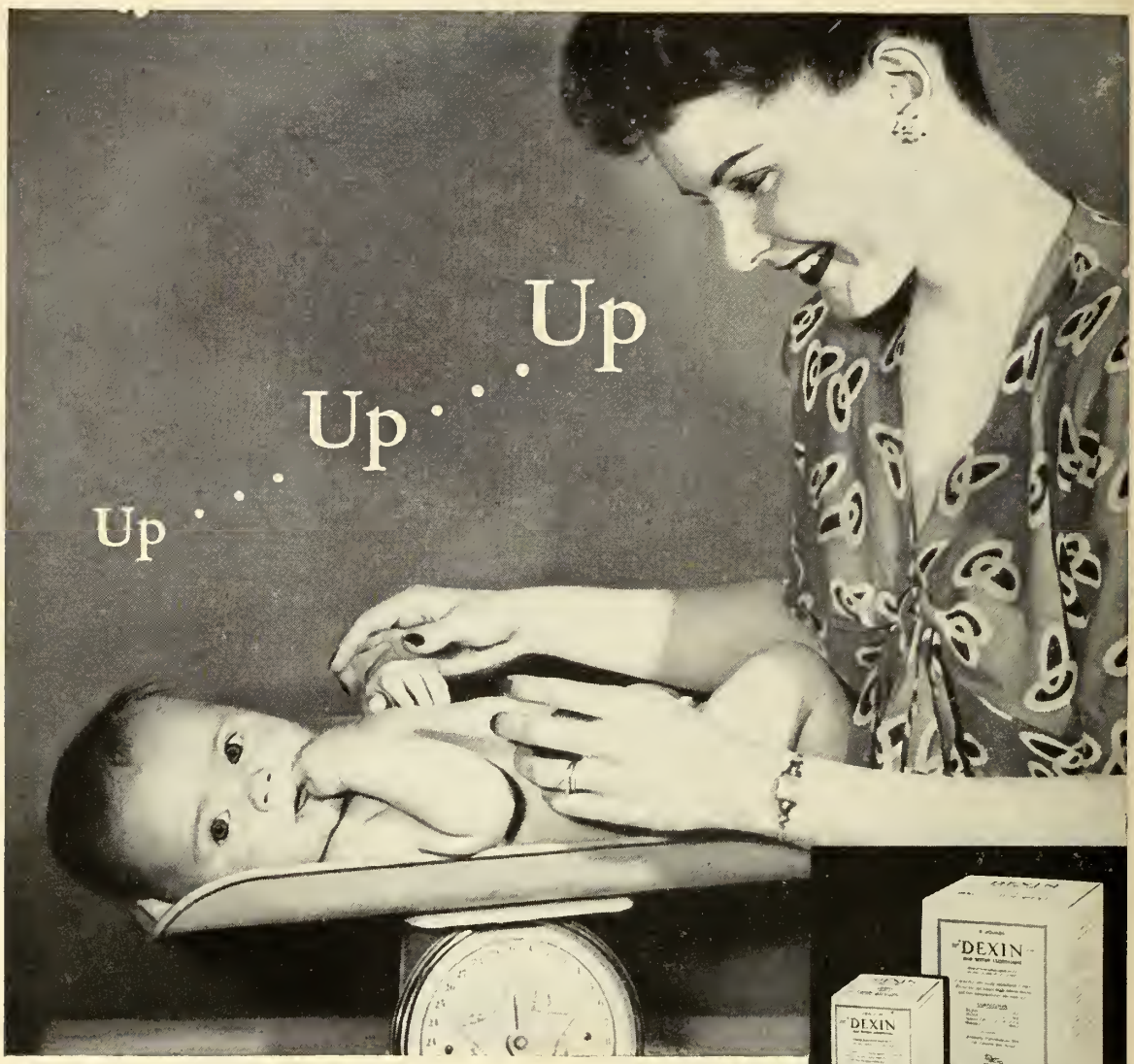
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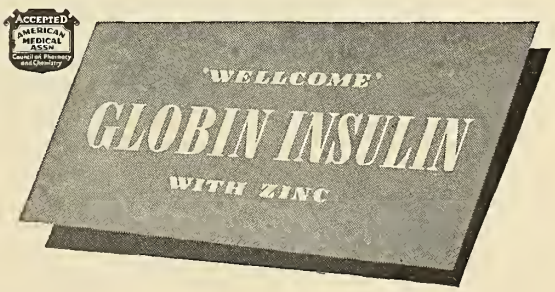
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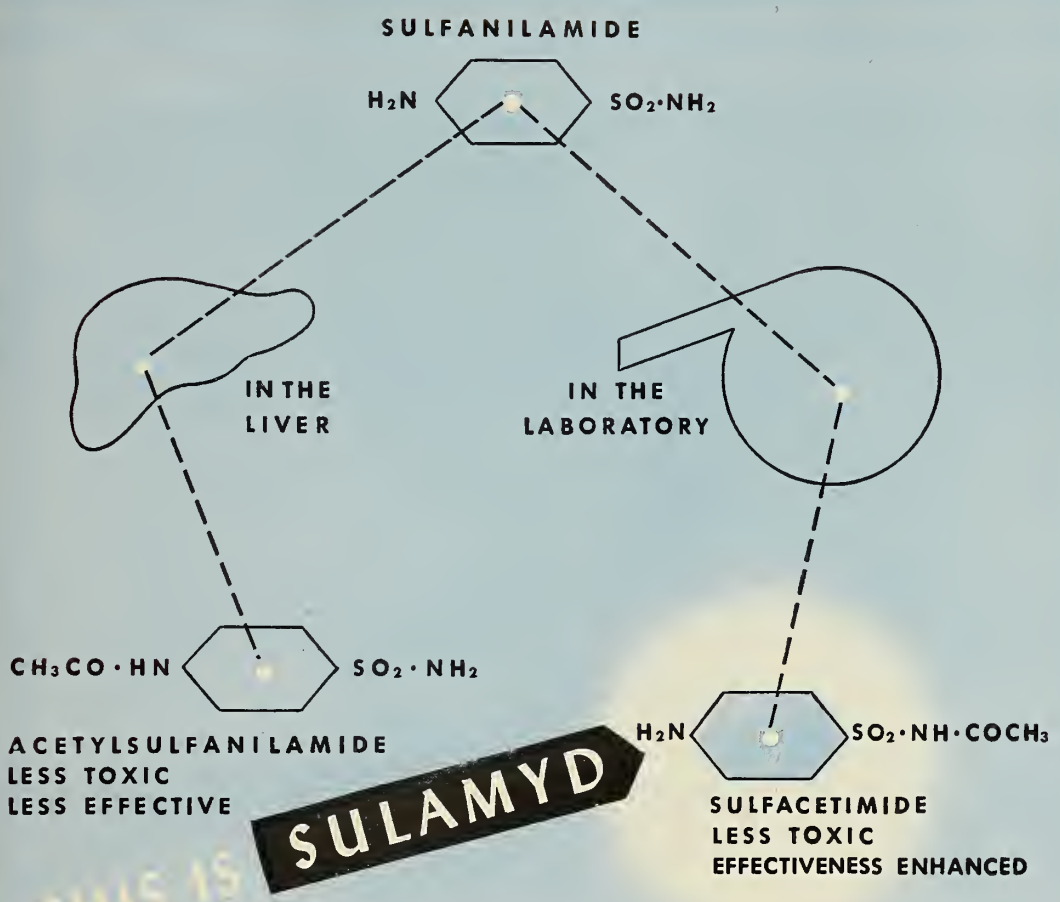
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LOOKING AT MEDICINE*

CHARLES PAUL AUSTIN, M. D.
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IN these days of social change in the realm of living, it is well to stop and *Look at Medicine* and view its future in terms of its past and present achievements. Physicians are so close to the subject of Medicine that, as a profession, they are apt not to "see the forest for the trees." It is characteristic of those who strive to "point with pride" to their achievements and to "view with alarm" any change in their scheme of living and doing. Medicine has pointed with pride, and justly so, to its achievements in the field of scientific endeavor—achievements which have resulted in a longer, healthier and happier life span for the people of our nation. In spite of these advancements, Medicine today finds itself in the lime light—if not on somewhat of a spot—with the "well doers" of this land who would take the direction of the affairs of Medicine out of the hands of those trained and skilled in its prescription and turn it over to those whose experiences lie mainly in administering a program of political preferment under the guise of the "public good". So, I say, let us stop and *Look at Medicine* and invite our public to scan the subject with us so that misdirection may be averted.

Looking at Medicine from the standpoint of service, will its practice, as our predecessors developed it, survive or will it be caught in the tide of social change which has been swelling with a foreboding roar during these war years? The answer to this question may of necessity be vague, as yet, but the problems arising demand the careful study of, and the mature judgment in their solution of every practitioner of medicine.

The practice of medicine, as developed by our predecessors, concerned itself almost exclusively with restoring the body to a normal state of health once disease had attacked it, and with setting about it to see that this same disease was brought under control so it would ultimately never strike at the health of the community again. And a good job they did, these earlier Men of Medicine, as witness the progress of scientific medicine during the past half century. The story of disease control, of miracle drugs and miracle surgery is too well known to need discussion here. Instead, let us get down to cases and look at Medicine as it is found today.

It is no new story that Johnny Doughboy is looking at Medicine and seeing it at its scientific best as battle wounds or illness strike him. He extols the "medico" long and loud for what he is doing during this war. Citizens on the home front have never been more confident of the quality of medical care tendered them than now. There is nothing new about all this—it is an old story to all concerned.

It is the social reformist who would have all believe that America is a nation of physical weaklings as he dramatically points to the rejection of twenty-five per cent of all those examined for military service. Out of the resulting discussion has come a new term these past two years or so, a term that has the ring of a by-word to both the profession and the public. I refer to those two words heard on every side —"Physical Fitness."

A Physical Fitness program of national magnitude is in the immediate offing. The machinery of that program may not be discussed here because of space. As organized medicine looks at physical fitness, permit me to quote from a recent editorial appearing in the Journal of the *Indiana State Medical Association*. Says this editorial:

> "Yes, we were shocked to learn that so many of our young people were unfit for military service, and we agree that something should be done about it. First, however, before deciding to do something, we must decide *what* to do. It will not help much just to do something—anything. Is it something that can be corrected? Is it something that we physicians should correct, or is it possibly something that can be done by the whole population? . . . General physical fitness is a desirable thing to have. It is a splendid ideal toward which to work. It will not be accomplished over night. We shall not gain it by dropping our time-tried methods which have brought us far, and dashing after a will-of-the-wisp which promises to bring us to it immediately. Let's keep up the good work, with physicians, dentists, teachers, preachers, coaches, parents, scoutmasters, Y. M. and

* President's Address 1945.

Y. W. C. A., park boards, and everyone else right in there pitching. We must work together on this thing; we must avoid blaming each other; and we must keep right on doing even better the things we have been doing rather well."

Within that quoted paragraph, you will find the part the physician must play in this program of Physical Fitness. It is not a solo job but he must be on the team. Arizona will carry on the program as it comes to the medical association from the national committees.

Confusing the issue, the "Messengers of Change"—those do-gooders—have taken advantage of these war times as a proper era for their door-to-door dispensations. It is during these war times that the Wagner-Murray-Dingell bill** has been proffered as the "Come one, Come all" solution for the medical ills, financial and otherwise, its sponsors have dreamed up for the people of this nation. Yet this panacea for all bodily ills facetiously neglects to include the indigent among those needing medical care and meriting medical service! An additional tax would have to be dipped out of the pot for the indigent who, above all others, is entitled to a tax-supported health program. It has been during war times that the Children's Bureau has dived down and come up with the EMIC program without benefit of advice from the profession which must perform the job and turn the trick. During these same times a vocational rehabilitation program has been promoted on a much larger scale than formerly, with a multitude of ills now covered and, perhaps, another multitude to be added gradually.

It is during these years of war that the Military has seen fit to shorten the education of physicians with a nonchalant wave of the hand. I would refer you to the *Saturday Evening Post* for January 27, 1945, to the article on Page 34 by Dr. Evarts A. Graham.* The article is entitled, "Have the Armed Services Crippled Medical Education?" By reading this article you will see in black and white what you already know of changes in medical education during this war—that the splendid system of professional education which has enabled the surgeon to perform his miracles for Johnny Doughboy on the battle field is being relegated to the ash can while an abridged schooling,—for a limited few,—that will give America fewer and poorer physicians for both the military and home front in the years ahead, is taking its place. With Dr. Graham, all must agree that "The future of American medicine requires a realistic approach to the needs of the Army and Navy, as well as the home front, for doctors—and not slapdash doctors, but doctors trained in the thorough manner which has given to American civilian and military medicine a leading position in the world." If there is anything wrong with medicine today, certainly this abridged program of medical education, sponsored by the government, will correct none of it.

It is our predecessors in *Medicine* who wiped out the diploma mills and elevated the medical colleges of our land to the high plane of turning out the best trained physicians in the world. By the force of a mailed fist is that now to be lost in part and in kind? Physicians will need take a hand in this new plan of medical education and assert themselves in this program so that Johnny Doughboy and Mary Citizen may have the same skilled medical care tomorrow they are receiving today. Medical education must not be permitted to deteriorate.

Comes now the question of cost as we look at Medicine—the cost that the Messenger of Change is crying in his "Hear, Ye, Hear, Ye" as he gallops across the commonwealth in his frenzy. Remember now, that this do-gooder has penned his bill, Wagner-Murray-Dingell,** and assured Mr. and Mrs. John Q Public that here is medical care for free (at another 8%!) Long before his bill was spawned in the political stream, *Men of Medicine* were at work on local medical service plans whereby Mr. and Mrs. John Q. Public could prepare their own medical services from their own earnings at a figure so economical as to be beyond political comprehension. It was the physician who felt something should be done, and could be done, to lessen the financial load for his patient when illness struck with its attending accouterments of expense, and he set about doing it. Some twenty years ago, medical organizations initiated their first medical service plans—plans which have been slowly but soundly (all progress must be so) taking root until prepaid medical service and pre-paid hospital service are growing apace throughout the land today.

* Professor of Surgery, Washington School of Medicine, St. Louis, Missouri. Major in World War I in charge of evacuation hospital. Appointed by Secretary of War in 1942 on committee to study medical needs of Army.

** A new Wagner Bill has been introduced since this address was written.

Arizona physicians have not been behind in these studies and deliberations. This Association, of which we are all proud and working members, had its plan ready to launch but the depression era forbade the efforts. Business was not ready or able to lend its support. Now that Arizona is on the upgrade in trade, and business, a medical service plan for Arizona is again being studied and readied for the people of this state. The Blue Cross Hospital Service, in the past year, has taken root in the state and is softening the field for a medical service that is bound to follow.

The Wagner-Murray-Dingell bill is not needed in any of its provisions; it has no place in a program of Physical Fitness It will not be wanted by the public if physicians themselves will place the proper label on this lethal public dose and show it for the skull and cross bones that it is! *Doctor, I say Mr. and Mrs John Q. Public prefer your plan and your trained professional guidance to any lethal political scheme that could ever be concocted!*

In looking at Medicine, another problem rears its head—I refer to the uneven distribution of physicians in which physicians tend to locate their practices in the larger centers of population. Arizona has been confronted with this problem for years in twelve of its fourteen counties, for it is only in two counties that the state population centralizes. In the past, the people in the smaller communities were given to scoff at the physicians locating there and to say with a shrug of the shoulders, "This physician can not be too good or he would have located at some larger place." The refusal of the people in these smaller communities to patronize their home-town doctor and their tendency to go for medical care to the larger centers, both within and without the state, have compelled the physician to move elsewhere. Now that travel is restricted, the small communities not only request, but demand, the "cream of the crop" physicians for their localities even though they have not been farsighted enough to patronize them in the past or to establish proper small hospitals and other medical accessories to entice physicians to locate and to remain there.

What can the medical profession do about this problem of unequal distribution of physicians? Will the plans proposed by the United States Public Health Service for the establishment of diagnostic centers in the smaller centers lure physicians to them? It seems to be the consensus of written opinion that the answer is, at best, doubtful. Such centers will not insure the patronage of the local citizenry once gasoline and tires to travel to the larger centers are again available. Diagnostic centers in small communities will bring with them the problems or all such diagnostic centers. The best diagnostic centers can not solve, either for the public or the profession, the problems that arise from this type of practice. The period of trial and error will be costly for such services in a state of Arizona's geographical range and scattered population As I see it, it is only by a program of health education where the public is brought to realize fully the stellar role played by the general practitioner in the general health picture that the problem of distribution of physicians can begin to approach solution. The general practitioner is the warp and the woof of medical practice and medical service. The specialist brings the pattern into bold relief. It is the general practitioner who must serve the smaller communities.

In *Looking at Medicine*, the political opportunist is raising another cry—the doctor is making too much money., In the not too distant past there was one William Osler, M. D., from whose lips fell many true pearls of wisdom. It was he who said, in measuring the worldly goods one might hope to amass upon entering the practice of medicine, that the first five years of service, so far as income might be concerned, is the bread and water period; the second five years, the bread and butter period, and the third five years that of cakes and ale. Fifteen years, if you please, to work up to the simple luxuries of living! A few physicians, along with an equal if not greater number of artisans, business men and professionals, have advanced a little too rapidly to the luxuries cited by this medical man of wisdom This is regrettable for various reasons This sudden financial affluence may be attributed to the trends of the times rather than to the faults of the profession, for it is as true today as when Dr. Osler spoke the words a few years back, that the first ten years of a medical practice is one of establishment and that it takes another half decade to reach the elements of comfort symbolically mentioned by this learned man. It can be truthfully said that, taking the medical profession the country over—outpost,

hamlet, and town—as many, if not more, physicians are living *below* the luxury level of fifteen years established practice as are living in it or above it! Such is the law of averages in all businesses and professions

It is regrettable, but true, that there is a handful of medical practitioners among us in this country—whose kind will always be with us, even unto the end—who think only in terms of what they can get out of the practice of medicine, never what they can put into it. It is this minority of medical practitioners the political opportunist is citing in his harangue on the evils of the practice of medicine. It is to the majority group of medical practitioners—those tried and true doctors of medicine—to whom the public look for a sensible metamorphosis of service whereby the high standards of medical care may be maintained and yet made more adaptable to economic need.

In these various respects the public has looked at Medicine and found it good as revealed in recent surveys conducted by renowned agencies —and in no slap-dash manner—in representative states. These surveys reveal that the public is with that sound doctor of medicine who has always followed the best precepts of his profession and that the public is willing to follow this doctor in any social or economic medical program he may outline for the public weal.

Words of appreciation for the scientific and economic endeavors of the medical profession as a whole come with fair frequency from laymen and from lay organizations. An editorial in the *Labor Digest* (Indianapolis, last February) said in part in support of the motives of the physician:

> "The motives which inspire the young men to study medicine have never been mercenary. Some are moved by the blessed scientific curiosity which has brought about the civilization of man; some simply desire to serve suffering humanity and, allowing for the frailty of human nature, all no doubt are lured by the dignity of a learned profession"

In that editorial is to be found a true picture of the Man of Medicine. It is to that physician to whom the public look for all that is good in medicine, scientific or economic. It is that physician who has the esteem and respect of the public. Whatever new structure is to be built for the prescription of medical care, the public wish it to be designed by that physician. *Looking at Medicine*, the physician must, therefore, continue his efforts to see that the structure of American Medicine does not crumble into political dust. That is the way the public wants it. That is the way it shall be.

CASTLESS AMBULATORY TREATMENT OF FRACTURES

Report of 23 Applications of The Roger Anderson Skeletal Fixation Appliance

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WAR conditions have created circumstances, that require the briefest hospitalization of the patient as is possible. Therefore, an ambulatory method for treating fractures of the extremities should appeal to the paietnt as well as to a public burdened with taxes, which would be required to furnish long hospitalization for indigent patients. This method provides early ambulation and as a result there are economic and psychic benefits. It has been our experience that this method is a better procedure for the treatment of unstable or difficult fractures rather than easier method. At this time, it would appear there have been many abuses of external fixation and it would seem certain that errors could be due not to the mechanism itself, but from carelessness and ignorance on the part of the user. If such errors should spring from their own faulty technique, it would seem of vital importnce to avoid blaming this method of treatment for their own errors in technique- Carelessness can easily creep in, as the procedure appears so simple.

In this series of cases presented, we insisted on a strictly supervised skin preparation, which included shaving, scrubbing with brush and green soap for 8-10 minutes, and sterilizing with ether followed governing the insertion of pins. Considerable care was taken to see that half pins penetrated beyond opposite cortex as illustrated in Fig. 1-B. Frequent roentgenograms were taken to determine if any distrac-

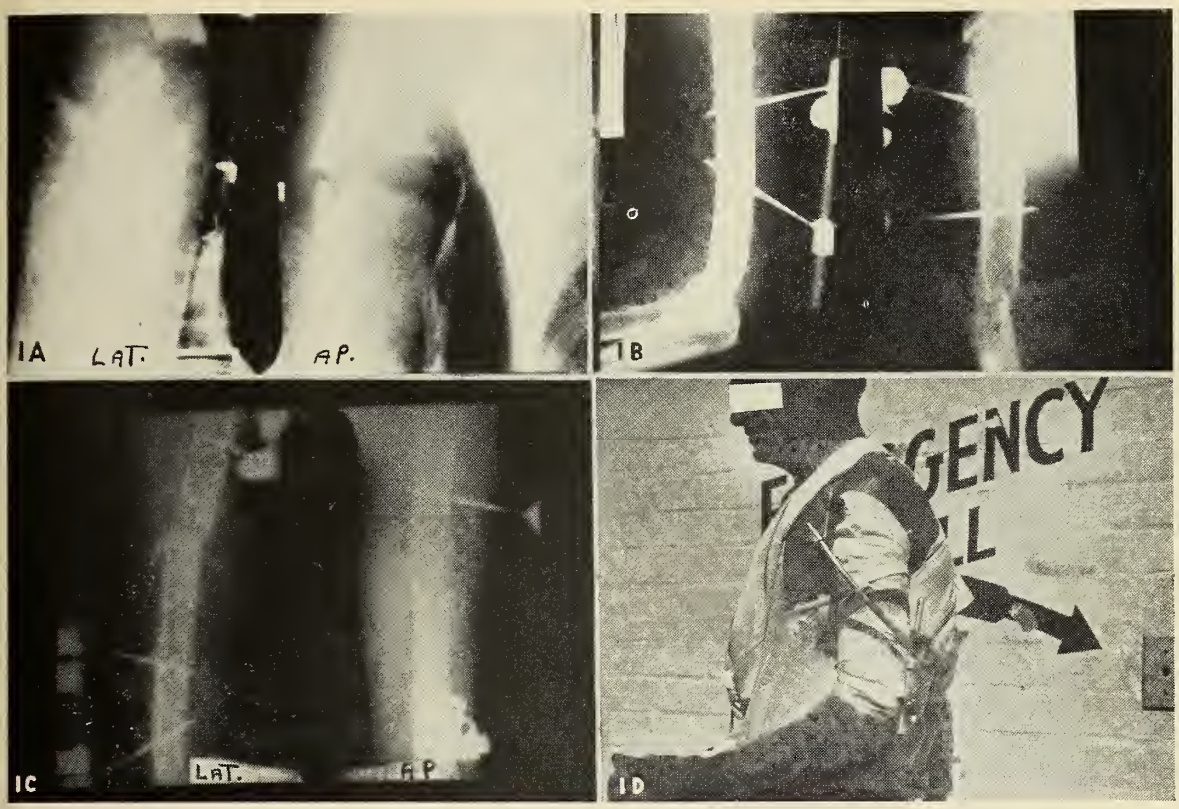


Fig. 1A—Case 1.H.T., age 64, shaft fracture of humerus. Hanging cast was applied on admission to hospital. Above film was taken 6 days following.

Fig. 1B—X-rays confirming pins penetrating beyond opposite cortex the proper depth.

Fig. 1C—Roentgenogram after reduction and immobilization by external fixation.

Fig. 1D—Photograph eight days after reduction and application of external fixation.

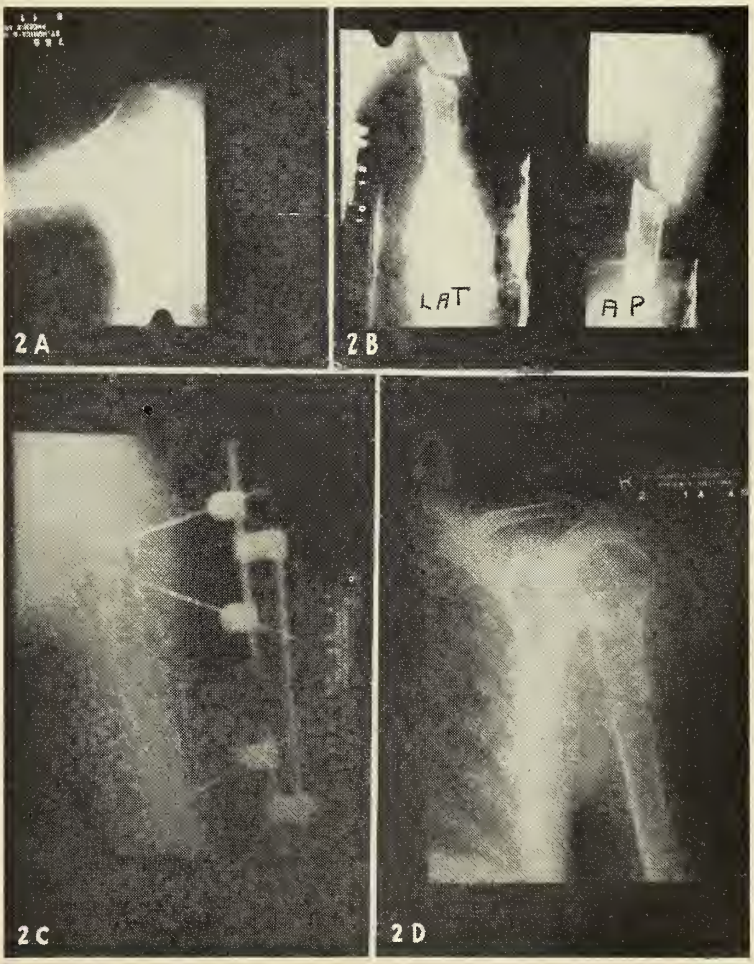


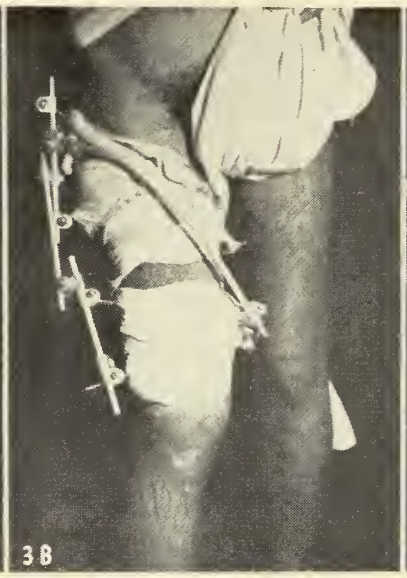
Fig. 2A—Case 2.W.P., age 79, X-ray upon admission to hospital.

Fig. 2B—Condition of fracture 7 months later, having been treated by hanging cast. Resulting in non-union.

Fig. 2C—Illustration of fracture after open operation and external fixation applied.

Fig. 2D—12 weeks after operation, patient had clinically sound union and confirmed by radiological reports.





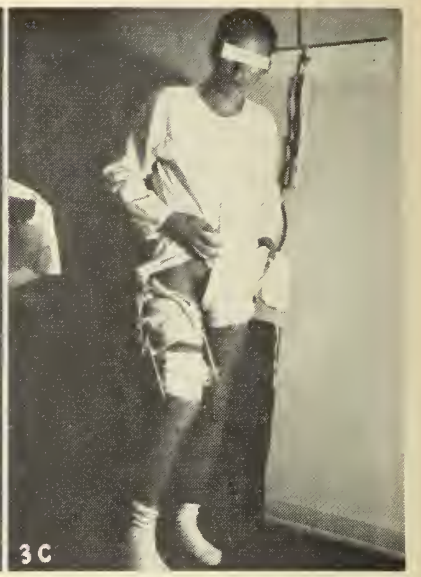


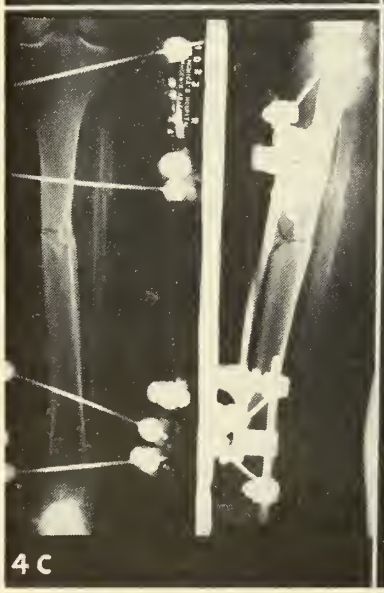
Fig. 3A—Case 3.J.G., age 14, Film shows comminuted shaft fracture after reduction with skeletal traction.

Fig. 3B—Photograph of splint on patient. Thru and thru pins in distal femur make it possible to use both sides of limb for fixation rods.

Fig. 3C—Patient three months after transfixation. Patient was released from hospital 14 days following operation. Original dressings were not removed for over 12 weeks.







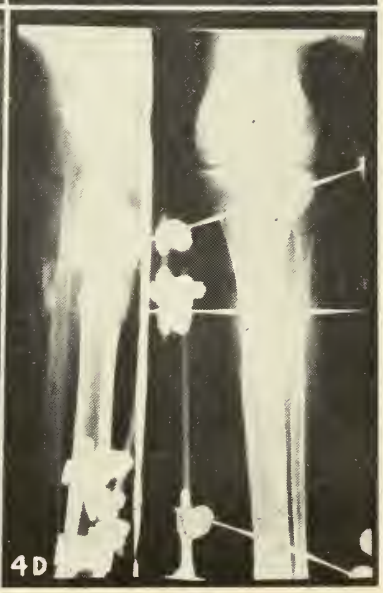


Fig. 4A—Case 4.E.C., age 70, scout film which appears to be stable fracture of tibia.

Fig. 4B—Fracture after application of plaster cast, showing posterior and medial bowing.

Fig. 4C—Remanipulation with external fixation. Reduction was obtained manually.

Fig. 4D—Eight weeks later showing amount of callus. Splint was removed at the end of nine weeks.

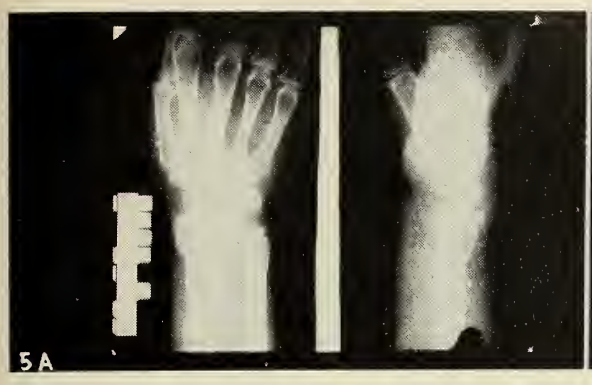


Fig. 5A—Case 5.G.C., age 60, X-ray revealing comminuted fracture radius and ulna.

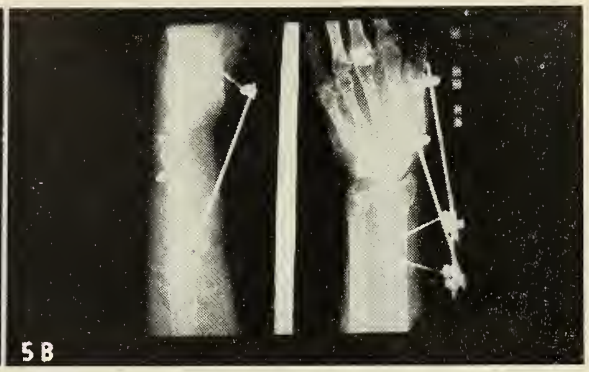


Fig. 5B—Reduction with apparatus, immobilizing and retaining apposition. Patient has motion of all joints adjacent to wrist.



Fig. 6A—Case 6. J. A., age 59. Film reveals a crushing fracture proximal end of tibia with tibial condyle depressed posteriorly and lateral.



Fig. 6B—Film taken after inserting two pins above and below knee joint to obtain traction, a 3/32 pin thru condyles maintains approximation of the large fragment. End result was excellent with good healing and functional knee.

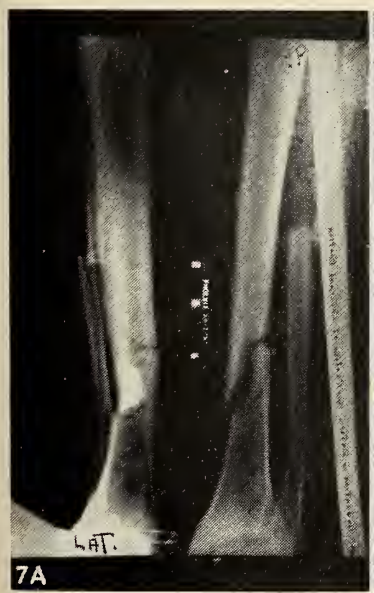


Fig. 7A—Case 7. S., age 67, compound, comminuted fracture distal and tibia and fibula, taken on date of admission.

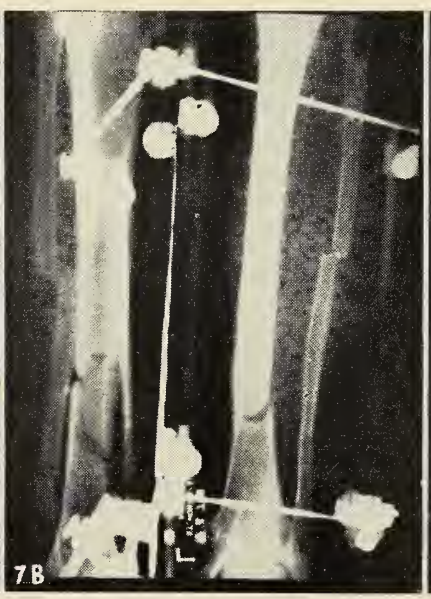


Fig. 7B.—Post reduction x-rays of pins in tibia. The os calcis was utilized for the lower pin of the distal unit, because of a large excoriated area at usual pin site.

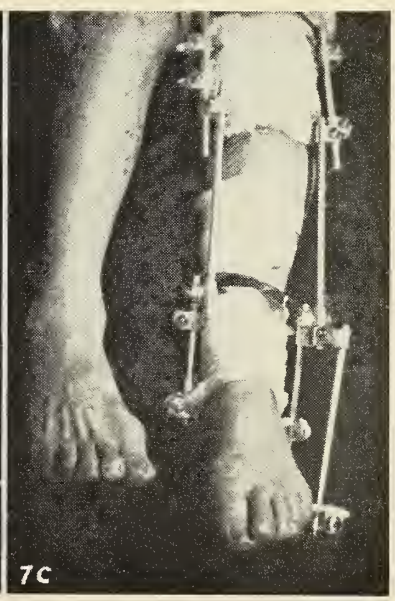


Fig. 7C.—Photograph of patient with Roger Anderson apparatus. Note foot rest assembly, which may be incorporated using fixation rods.



Fig. 8A.—Case 8. A. S., age 26, fractured radius plus dislocation before reduction.

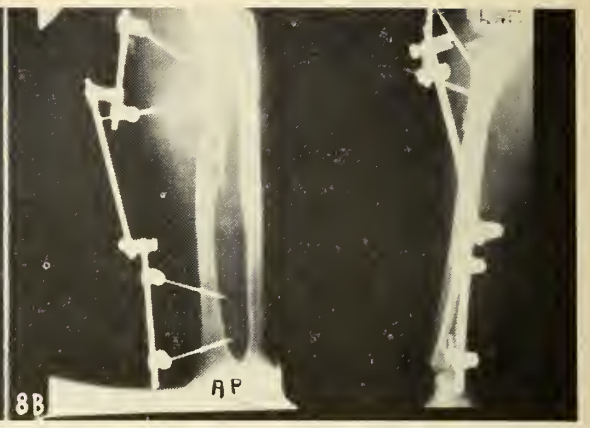


Fig. 8B.—Fracture after insertion of pins and manual reduction. Patient had good motion of elbow throughout healing period.

tion or absorption had occured, since a slight amount of separation will surely delay union, and impaction may be accomplished by a simple mechanical maneuver. Nursing staffs were cautioned about becoming over zealous in the matter of applying new dressings to pin wounds. Anderson advises the original dressing not to be disturbed. To discuss in detail the cases reported would go beyond the scope of this article. However, it can be said the Roger Anderson apparatus was used, being most adaptable to various types of fractures and relatively easy to apply and control.

SUMMARY

At present time we are unable to report an accurate end result on all cases. However, the eight cases represent a fairly accurate cross section of the 23 cases transfixed by the author, and it would seem presumptuous to assume this limited number could be authoritative. These cases tend to show, external fixation can be safely used on compound fractures, non-union and under certain conditions may be recommended as a routine treatment for shaft fractures. We feel it would be justifiable to use external fixation more extensively, so far as we have been able to observe from the results of this series of cases.

15 E. Monroe

Acknowledgment is made to A. J. Carroll, M. T., for his technical assistance.

REFERENCES

1. Anderson, Roger: J. Bone Surg., 16:379-393, 1934.

EARLY CARE OF CONCOMITANT MONOCULAR STRABISMUS

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IN recent years, more and more stress is being placed on the importance of early care in non-paralytic monocular esotropia. Irreparable ocular damage may be caused by late or no treatment. The most important point is to prevent an amblyopia ex anopsia (poor vision from non-use) from developing in the squinting eye. Secondly, an unfavorable influence may be exerted upon the patient's personality. The child soon develops an inferiority complex, becomes timid, backward and shirks from his normal environmental contacts. All of the above can be prevented by early treatment.

It is important to realize that squints appearing in the first year of life are not always permanent. During the first four or five months of life, many infants' eyes will turn in for several minutes. This usually occurs when the infant is disturbed by pains from gastric or other disorders. It is fleeting in character and should cause no worry. However, when a squint occurs after four or five months of life it should be watched closely, as it may be a forerunner of a permanent type. However, many of these will disappear with the development of the fusion faculty. Therefore, it is only the ocular deviations which are present after the child is 10-12 months old which should cause concern.

Therapy should be instigated when the patient is 14-16 months old and the first step is the occlusion of the fixing or straight eye. This makes the patient use the crossing eye and by its use the vision will develop normally. The occlusion is easily carried out by patching the "good" or straight eye for five to six hours a day. If an alternating esotropia is present, i.e. where the patient fixes with one eye at one time and the other eye at other times, occlusion need not be carried out as the child is already using each eye at different intervals, and consequently, the visual acuity in each eye will develop normally.

The next step in the treatment consists of a refraction under full atropine cycloplegia with the prescribing of the full cycloplegic findings. This should be performed when the patient is 18 to 24 months old, depending upon the mental age of the child in question. The glasses should be worn constantly. The occlusion of the straight eye is continued with the wearing of glasses.

When the child reaches the age of four years, orthoptic training is begun. There are several factors which govern the use of this training. In some cases, muscle exercises are contraindicated. In other cases, it can be determined in just a few lessons whether further training will be beneficial. If not, then surgery is indicated and is usually performed between 4 to 6 years of age. Orthoptic training is of no avail when a deep amblyopia is present. Even after surgery, muscle exercises should be continued until the eyes are straight and third degree fusion or deep perception is present.

Nonoperative treatment will result in a cure in about 50% of the cases. This figure is constantly being raised and will continue to do so because of the early treatment of these cases. Therefore, it is the early instigation of the first two steps, namely occlusion and refraction, which are the most important. Amblyopia is thus prevented and the prognosis greatly improved. First, more cases are cured nonsurgically. Secondly, even if surgery is performed, a perfect result can not be attained without the development of good fusion, which in turn can not be attained in the presence of an amblyopia.

710 Professional Building

THE RELATION OF THE DOCTOR TO THE HOSPITAL

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OBVIOUSLY, in the discussion of this topic there are many angles to be considered and doctors, as a rule, being very rugged individualists, there naturally will be many angles and ideas of the relation of the doctor to the hospital. The different types of relation, phases, or factors involved will be dependent upon a multitude of elements. The type of hospital is one factor—depending upon whether it is a *community* hospital, a *stock company* in which the doctor is financially interested, a *general hospital,* a *private* hospital, a *non-sectarian* hospital, or a *religious* hospital. Then again it depends on whether the hospital is one of a *highly specialized type,* such as strictly a *children's* hospital, a *women's* hospital, or a hospital which confines its work to a certain type of disease or part of the body, namely, eye and ear, contagious or infectious diseases, mental diseases or purely general hospital.

Broadly speaking, however, it may be boiled down to somewhat the following subdivisions:

I. *IMPERSONAL ASPECT:*

(1) First, the *community aspect*—The truly conscientious and interested doctor is interested about the health of the community. Therefore he is bound to have a vital interest in the type of hospital in the community, the way it is managed, and the results it is able to give to the community.

(2) This might be carried a little farther to the factor of *civic responsibility,* from the standpoint of the doctor and in that aspect his relation to the hospital. The doctor's aim and ideal should be sincere interest in the hospital from the standpoint of uplifting and constructive leadership, pointing the way to a more healthy and progressive community.

(3) There is also a certain *Nationalistic aspect,* especially significant at present, which has a bearing on the relation of the doctor to the hospital.

II. *PERSONAL ASPECTS:*

(1) As it is so often correctly said, the hos-

pital is the *workshop* of the doctor. However, it is no more unusual for a doctor to need or have a place to do his work than it is for a watch repairman or a garage mechanic, or any other type of artisan. Nevertheless, it must be remembered that the hospital is more than just a mere workshop. It is a place of many tech-- *nical* and *highly specialized* departments, in many instances not fully appreciated by a large number of the staff doctors. Most people and many doctors think of the hospital as a place of comfort and security for the patient, with all necessary laboratory and operative facilities. All too frequently the "behind-the-scene" factors are never thought of, or if they are em, phasized, it is because of a breakdown of a temporary nature in some remote department, i. e. the laundry, the power plant, the housekeeping department or any one of the numerous unsung departments. The doctor's personal interest and relationship should be broad enough to include and appreciate the 20-25 tangible or intangible, personnel-patient contacts or, putting it another way, the 1½-1¾ employee per patient ratio. It is the proper co-ordination and function of all these departments that makes it possible for the doctors to carry on research work and properly care for their patients.

There should be a *mutual challenge* between the doctor and the hospital. On the one hand the hospital is endeavoring to provide laboratory facilities of the most efficient and best type, including pathologieal and x-ray laboratories, the best surgical and medical equipment possible, libraries, staff rooms, record librarians, and all the necessary and vital adjuncts including internes, which make for the practice of better

MEDICINE AND SURGERY.

The factors mentioned above make it incumbent upon the doctor to keep himself *abreast of the times*, medically and scientifically, and puts the responsibility of the standing of the hospital squarely on his shoulders where it rightly belongs. Of what value is a laboratory if the staff does not know how to interpret the reports? Of what value is a good system of records, file system, and excellent librarians if the doctors do not furnish adequate and accurate case histories and fail to keep up progress notes that are of value? The wise, prudent and conscientious doctor will do these things for the prevention of law suits if for no other reason. This leads up to the subject of the doctor's conduct.

III. *CONDUCT:*

There are many types of doctors just as there are many types of lawyers and other professional folk. Briefly, we may group the doctors under the following types:

(1) The Sherman-tank type of man, whose voice will be heard through all the corridors for a distance of three-four floors. He generally is in a good humor, but his conversational tone is as quiet as that of an auctioneer's voice, and seldom soothing to his patients.

(2) There is the quiet, genteel, mousy type of doctor who cannot be heard and hardly seen.

(3) Then we have the untidy sort of man, who goes through the halls smoking a pipe or cigar, or cigarette, scattering ashes not only in the halls but in the chart rooms, over the charts and more or less around the patients' rooms, unless perchance he puts his cigar or cigarette on some convenient doorstep or in the hall and goes away and leaves it.

(4) There is the type who never has any set time for visiting the hospital and is just as apt to see them at bed-pan time, meal time, or late hours of the night. In most instances, except in cases of emergency, these visits could be arranged at a more convenient and less disturbing time for the patient and everyone concerned.

(5) The Aek-ack type of doctor, and for that matter, many other types of doctor are prone to tell jokes, some of which date back before the time of Confucius and in the telling of these jokes, they get rather loud and enthusiastic. This is sometimes rather disconcerting to the patient and time-consuming to the nurses who should be busy and have little time now to listen to old jokes. Motto: "We are always glad to see our doctors, but we have no time for idle talk or old stories. If we are not busy, we should be."

(6) One type of doctor who causes more or less confusion is the man who has imbibed a bit too freely before he decided to make hospital rounds. He is apt to be slow, inaccurate, noisy, and in other ways may make a nuisance of himself.

In a few instances, the doctor's attitude from the standpoint of loyalty or buck-passing is very bad. It is very easy by the mere shrugging of the shoulders or lifting of an eyebrow

at the wrong time, to cast some reflection on the hospital and its standards, or the type of employee. That may be a very costly thing to do and certainly is most unfair and unsportsmanlike. The real relation to the hospital from the standpoint of conduct is one of courtesy, consideration, promptness, the cultivation of a splendid pleasing personality and professional and social etiquette.

One phase of the doctor's relation to the hospital demands that he do all in his power to be professionally within the rules prescribed for etiquette, for professional ability and a sense of square dealing. Also it should be a spontaneous habit to compliment everyone in their work and sincere effort. Verbal gratitude costs little, and makes it much easier for the recipient to do the next task with a lighter heart.

A very important factor that many doctors fail to take note of is their relationship to the hospital is their attitude toward the various types of hospital personnel. A true sense of common courtesy and a sign of interest in fellow humanity will be manifested by a pleasant smile and a polite salutation to any member of thoe hospital staff that might ordinarily be contacted in hospital visitations—the man or woman washing the floors or corridors or the stairs will respond to a courteous greeting and will proceed with their task a bit happier for the recognition of courtesy rather than a brusque "move out of my way" attitude. Such small acts of courtesy are the cement that binds the structure called "esprit de corps" together. The elevator operator understands the words "Thank you", and the telephone operators have time to listen to a "please" and "Thank you" instead of "Why don't you sleep at home " Remember—a pleasant smile or a cheery good morning may make the day easier for any employee, whatever his or her rank, who besides their duty of the moment may be carrying a heavy personal burden of their own at the same time. Doctors should be salesmen of optimism and good cheer.

In their relation to the hospital the doctors must know there are certain rules and regulations and that they must be enforced even though the management does do that in some cases with reluctance. A doctor should not take advantage of any unnatural situation to force an issue with the management concerning admission of patients or favor that he may wish done. A cheerful compliance with the rules is a human responsibility seldom carried out.

IV. *COMPLAINTS:*

Doctors should realize that things will not always run smoothly, or in the way they wish them to go. At such times their tempers may be short; however, they should remember their position and the fact that their training and education have all been along the lines of calmness, clear thinking and mature judgment. A quiet dignity in times of stress, or when others are losing their tempers, is a mark of a real gentleman and a true doctor. Anything done for the hospital from the standpoint of serving on boards, committees, or teaching faculty, or donation of funds should be done with generosity and with no thought of putting some one on the "spot" for future favors. Carrying out the rules and regulations, the doctors would do well to comply with all the requirements concerning charts, signatures, and compilation of all records as soon as possible.

The monthly staff meeting is a meeting that in most cases doctors are required to attend in order to keep their standing with the hospital; however, the doctors should be glad to attend these meetings and they should be of such type that they provoke great interest and the doctors would feel that they were losing something if they did not attend. This is a relationship between the doctors, themselves, and not necessarily a hospital affair, purely.

The doctor's relationship to the hospital should include constructive help and suggestions. Styles in all phases of life are constantly changing. That is true in hospital management, hospital construction, hospital technique and all factors involved in hospital management. The hospital, by its activities and its efficiency, is a legitimate source of advertisement to the public for the benefit of the doctor. The better the hospital, the better it is run, the more efficiently it is run, the more wholesome the relationship of the doctor to the hospital, will be a great boomerang for the good of the doctors connected with any institution that is well thought of and well spoken of. The doctors can make that possible themselves by their own attitude and should bear in mind at all times that they are dealing in abnormalities. Their patients would not be in the hospital if they were normal. By the same token their friends and relatives are, likewise, in an upset

state mentally and sometimes physically, and often do not see things in their true perspective.

With these factors in mind, we have the factor of the nurses and technicians who are working directly with the patient and the effect of nervous friends upon the patient and the nurses and technicians. All these factors should be borne in mind and acted upon accordingly by the doctors.

A cheerful countenance and a spirit of buoyancy are things the patients need, and these cannot be brought to bear upon the patient if the doctor is selfish, thoughtless, rude, harsh with the nurses or inconsiderate of other people coming in contact with the patient. The doctor's relationship to the hospital—in the last analysis, is measured by the hospital's efficiency, by his attitude and co-operation with the management, including courteous treatment of the over-worked nursing staff. By that token we include the heads of departments, culminating in co-operation of the business manager and finally, the superintendent. All of the above departments are working for the interest of the entire group, not the least important of which is the doctor, and in the final analysis it is the doctor's attitude, individually and collectively, that sets the standards.

In an attempt to see both sides, I have asked the heads of the three departments in the hospital that have the most intimate contact with the doctors, for their views concerning this problem.

From the Viewpoint of the Admitting Office Nurse:

The lack of beds and the decrease in the number of nurses have created a very difficult position for the Admitting Office Nurse.

Heretofore, we had ample room and enough nurses to meet every call, but now with the tremendous increase in patients and few additional hospital facilities, we fall short of meeting the demand. Although we are trying to eliminate using valuable bed space for patients not in actual need of hospitalization, we must rely on the judgment and discretion of the physician in charge of the case.

The average patient realizes it is more convenient and less expensive to remain in the hospital a few additional days than to employ help for care in the home.

Employees of practically all factories and institutions have availed themselves of group insurance and bring great pressure to bear upon their physicians in order that they be hospitalized in cases of illness, regardless of the severity.

In order that emergency cases be immediately hospitalized, it becomes the very unpleasant duty of the Admitting Office Nurse to cancel or postpone a reservation which has been made from ten to twelve days previously. In this she is wholly impersonal and unprejudiced as touching either the physician or the patient. Nevertheless it takes a very understanding physician to accept this kindly, and many times the patient feels he or his physician is being discriminated against.

Only by the knowledge of our understanding and co-operative doctors are we able to carry on with any degree of satisfaction to ourselves and credit to our hospital.

From the Viewpoint of the Hospital Business Manager

Unfortunatetly at times of illness, there is a necessity to think of the economical side of illness. We all know that it is very costly to maintain the high standards that we have set for our hospitals. The physician does not have his emotions involved at this crisis, and should advise and direct the patient in selection of his accommodations in accordance with his means. Patients during the crisis are apt to lose sight of the economical side and sometimes to order in excess of their ability to pay. The physician should remember, however, in advising some patents to take ward beds, that these beds are maintained at less than cost and should give the hospital the opportunity to recover this by advising their patients to take private rooms.

Over a period of years, both the hospital and the physician have found it sound policy to ask for a deposit in advance from incoming patients. It has been found that when a patient has been advised in advance by the doctor that a deposit will be required and payment must be made in advance, that the patient will not resent being asked for the deposit, but will be aware of the probable expense, and will feel much better toward the hospital and its charges when these things are discussed in advance.

The physician also benefits by these advance arrangements, because when these things are not clearly understood, it reflects on the physician, for he is the one who made the recommendation for that particular hospital.

From the Viewpoint of the Hospital Administrator

There is an axiomatic statetment that "You cannot get more out of a thing than you put into it." Therefore, for a hospital to pay its bills, it must keep within its budget. Patients coming in should be made aware of the cost of their hospitalzation, as far as possible, by the doctor, rather than have startling amounts thrown at them at the Admitting Office.

Then, from the other point of view, if you listen to every doctor who gives you a suggestion as to how to run your hospital, we would be buying things all the time which are used once and then not used again. This makes hospital care very expensive. Some doctors and nurses are thoughtful about the amount of catgut they use in surgery or linen that they use in the rooms. All of which in the added amount brings the cost of hospital care up tremendously because of wastage. Doctors ordering certain types of drugs just because they hold stock in a certain drug concern, does not make for efficiency and the low cost of care.

Imposition of one kind or another upon any department by the doctors just because they bring a lot of patients to the hospital is not good policy; and when a doctor gives that as his reason, he should be well reminded that if it were not for the hospital, a great deal of his business would not be able to be taken care of, because of the grouping of patients within the walls of the hospital. If every doctor wanted just his patient in as a charity patient, and each doctor did the same, you would soon have your hospital in bankruptcy.

Yes, doctors are our salesmen for the hospital care which we furnish. For that reason we should show them every deference possible within reason.

SUMMARY

Chemically speaking, the relationship of the doctor to the hospital might be termed a reversible reaction. To say that the relation must be correct is putting it mildly. It is vital, essential, and for the doctor with any spark of ambition, an absolute necessity. The hospitals, through alert nursing staffs and with their facilities for accurate and orderly filed records, their laboratories, surgeries ,and x-ray laboratories, have been an indispensable aid to the doctors and without which progress would have been slow and costly. However, time is a great factor in a doctor's life. They sometimes forget that everything should be written—that is, orders for the patient, orders for the laboratory work, and notes as to the condition of the patient. One little tip—if all doctors would sign their patients' charts at the time of visit it might save many medical-legal complications.

In conclusion, next to the patient's religious counsellor, the doctor plays the most vital role in the drama of life. What preparation, what training, what specialized thought has the doctor made a part of his armamentarium to cope with their problems! In many hospitals the doctor, by a statue, a painting, a cross, a brief written message or some other token is made aware of the fact that he is in an unusual place or situation. Is this not another factor of great importance with the elements that constitute a basis for a fine and effective relationship to the hospital?

Finally, the true doctor is a sincere salesman for the facilities of the hospital and what it has to offer—a salesman for the value of the healing art, and above all should be the source of hope, cheer, encouragement, comfort and poise in all the crises of life.

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AMERICAN MEDICINE TOMORROW

MAC F. CAHAL, *Exec. Sec.*
American College of Radiology

IN his excellent book comparing the theories of Oswald Spengler and Raymond Pearl, "Today and Destiny", Edwin F. Dakin expresses a truism that is of particular significance for doctors in these dynamic times: "Any concept—economic, political, or cultural—which leaves its possessor wholly unprepared for tomorrow is of doubtful validity. Conversely, men who are not surprised when the future comes, lie very close to the truth."

Doctor Lowell S. Goin, president of the American College of Radiology, was pleading for a true concept of the future when, in a recent letter to Members and Fellows of the Col-

lege, he warned of impending social changes that would almost certainly result in new methods of distribution for medical services. He urged radiologists to actively encourage voluntary prepayment plans for medical care, sponsored by medical societies, as the soundest and most desirable method among the many that have been proposed. At the same time, he warned that some form of socialized medicine, embodying compulsory health insurance, is not an inconceivable eventuality.

Doctor Goin's concern would seem to be justified by what most observers have recognized as an increasing pressure of public opinion. The attitude of the public was succinctly expressed by FORTUNE magazine in its December issue: "The state of medicine in the United States is a social problem because the country's conscience has made it so . . . people who cannot find or pay for proper medical care are resentful."

I have been sharply criticized in some quarters for a statement made in my annual report to the College two years ago in which I referred to the powerful social forces at work throughout the world and their manifestation in agitation for socialized medicine in this country. I remarked that there was a growing conviction among medical men that a head-on opposition to this unmistakable trend would be as unwise as it would be futile. Subsequent events have proved, I believe, that the demands for improvements in the distribution of medical services must be met, either by voluntary plans for prepayment or, if not, then by compulsory health insurance. It seems unnecessary to recite the extensive evidence that this is so. A half dozen public opinion surveys have revealed a definite public demand for insurance against medical costs.

Brigadier General Fred W. Rankin, in his presidential address before the American Medical Association House of Delegates last year called upon the medical profession to recognize the gathering momentum of trends that are "directed toward some form of national health service as an integral function of the state." He made a plea that they be regarded not in the light of apostasy, but rather in the light of realism.

Dr. Allan Gregg, whose words carry considerable weight in the medical world, has uttered a similar warning. "The danger for medicine in America lies in failure to acknowledge and to study the sociologic aspects of medicine—the social matrix. We are loath to see that research and teaching, as well as the practice of medicine, will change when change comes in the prevalent interpretations of the role of government and the structure of our society," he says.

It would appear, therefore, that if we are not to be unprepared for tomorrow, we should give consideration in our deliberations to the likely effects of all the various proposals for changes in the economics of medicine. It is a poor general who fails to consider the probable results of every possible contingency that may alter the existing situation.

In our efforts to peer into the future of medical practice in theUnited States I think we should keep one very important point clearly in mind. It is this: Every system of compulsory health insurance in all the countries of the world has been built upon existing agencies for the distribution of medical care. On the basis of history, therefore, we can assume that, if a system of compulsory health insurance is adopted by Federal or State governments in this country, existing plans for the application of the insurance principle to payment for medical care would be utilized by the state. The obvious corollary is that medical practitioners would carry on under the state plan much as they did under the voluntary plans which preceded it. This has been almost the universal experience in European systems.

Writing on the "Origins of Health Insurance," in their excellent book on this subject Simons and Sinai show that compulsory health insurance is built out of three existing institutions: insurance or prepayment plans, the state, and the medical professions. "The relations, reactions, and relative strength of these determine much of the character and results of compulsory health insurance throughout the world leads them to conclude that pre-existent voluntary prepayment plans have dominated the state systems which followed.

Douglas and Jean Orr, in their book on the British experience with health insurance, point out that the form which the national health system of England finally took was determined by the "friendly societies" which had existed for many years as voluntary plans for prepayment to meet the costs of sickness.

Sir William Beveridge, in his epoch-making

report on social insurance in England, observes the part which the voluntary plans have played in setting the pattern of the government system. He contemplates, though with frank displeasure, that they will continue to be utilized as distributing agencies in the expanded system which will undoubtedly be adopted in Great Britain.

He implies, incidentally, as have others before him, that voluntary sickness insurance promotes, rather than deters, the adoption of compulsory systems. In 1909 David Lloyd George pointed to the "friendly societies," which were comparable to our present prepayment plans, as proof of the feasibility and desirability of compulsory sickness insurance. The National Health Insurance Act came three years later. It is significant, perhaps, that efforts to enact compulsory insurance laws in our own country are today most concentrated in the two states with the oldest and largest voluntary medical service plans, California and Michigan.

We all hope that voluntary prepayment plans, sponsored either by medical societies or commercial insurance carriers, will meet the palpable demand of the public for relief from the unpredictable financial burdens of illness. If they do not, the lessons of history teach us that organized medicine has yet another compelling reason for extending these plans as rapidly and as widely as possible. Once firmly established, they would set the pattern and determine the methods to be followed in the event a compulsory system is adopted.

Now, in the light of these considerations, the group hospitalization movement, concerning which organized medicine has been exceedingly circumspect, acquires a new importance that tends to justify medicine's diffidence. Are the Blue Cross plans to duplicate the history of England's friendly societies? Two facts lend credence to an assumption that this is altogether possible.

First, a determined effort is being made by directors of Blue Cross plans to extend their benefits to include complete surgical or medical care. Second, Blue Cross plans would almost certainly be preserved and integratetd in a compulsory sickness insurance plan.

The first of these statements will be promptly denied by Blue Cross leaders. But the facts speak for themselves. In Delaware, the Blue Cross plan has already been expanded to include cash benefits for surgical care. It is administered by a Board of Trustees on which there are two hospital representatives for every doctor. Also in West Virginia and North Carolina hospital service plans have assumed full control of medical care plans.

The American Hospital Association, at its recent annual meeting, considered recommendations from several speakers for "extending prepaid hospital plans to cover out-patient care." At the same meeting the Hospital Service Plan Commission approved a proposed model enabling act for comprehensive health service plans which would require, among other things, that any plan incorporated under the act be controlled by a board composed of one-third hospital trustees, one-third doctors, and one-third lay representatives of the public. In the course of the discussions, Mr. Louis H. Pink, president of Associated Hospital Service of New York City, urged expansion of Blue Cross to include the costs of medical care without delay.

In Philadelphia, where the medical society several years ago fought a bitter and unsuccessful battle to exclude radiology and pathology from the hospital service plan, a proposal has very recently been submitted to add complete medical care to Blue Cross benefits. The proponents candidly recommend repeal of the present Pennsylvania enabling act, which requires that a majority of the directors of medical service corporations be doctors of medicine.

Now I desire that I not be misunderstood. Cooperation between hospital service plans and medical or surgical service plans is essential. It is rather generally agreed among hospital leaders that Blue Cross enrollment has about reached its maximum unless contracts for hospital service can be coupled with insurance against medical costs. There is no doubt that the United States Public Health Service will emphasize this fact in the report of a study it is currently making of the movement. Furthermore, it is both logical and economical to delegate responsibility for sale and routine administration of the medical service plan to existing Blue Cross plans which have several years of experience and have acquired trained personnel.

But, medical societies which turn over complete control of prepaid medical care to Blue Cross plans that are controlled by hospitals are traveling a dangerous road. They are violating one of the basic principles of organized medi-

cine if they fail to establish a separate corporation to control the medical plan, with a board of directors of which at least a majority are doctors.

Ten years ago the American Medical Association laid down the postulate that: "All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control." This principle has lost none of its validity.

If anyone is inclined to minimize the importance of this principle, he has but to follow the course of the controvesy that has persisted between hospital service plans and the organized medical profession over the inclusion of certain medical services as a part of hospital care. For ten long years county, state, and national medical organizations have insistently demanded that radiology and pathology be excluded from Blue Cross benefits. Everyone knows that the reaction of hospitals to these unequivocal demands has been one of polite indifference. What makes anyone think they would follow the dictates of the medical profession concerning other branches of medicine, once they were in control of medical service plans?

Constantly during recent years the American College of Radiology has warned that medicine would sacrifice a basic principle if it yielded to the adamant demand of hospitals that they be permitted to include radiology and pathology in Blue Cross benefits as a part of hospital care. Too often our admonition that this would open the door to further encroachments by which hospitals would assume added prerogatives in the delivery of medical services, has fallen on unheeding ears. Now, as one medical editor has sardonically remarked, "The beans are on the carpet, spread out for all to see."

The second fact stated above, that Blue Cross plans would be integrated in a system of compulsory insurance, is likewise more than a mere assumption. Witness the curious tergiversation that has taken place in Rhode Island. Not long ago the governor of Rhode Island proposed a law of compulsory hospitalization insurance in his state. Promptly Blue Cross executives all over the country assailed the proposal as "un-American" and "regimentation." But, when the governor publicly announced that he contemplated the use of Blue Cross as an agency under the system, opposition quietly died.

The Wagner-Murray-Dingell bill, as you know, authorizes the Surgeon General to "negotiate agreements . . . with private agencies or institutions to utilize their services and facilities . . . " In response to a question from hospital spokesmen, Surgeon General Parran has already expressed the view that this would include Blue Cross plans.

I would point out that this provision in the bill would also permit medical service plans operated by medical societies to enter into contracts for rendering services to beneficiaries. Significant also is the provision in the Wagner bill which permits the practitioners in each area to elect the method by which payment shall be made for services.

Does this not offer sufficient reason for medical societies to set up their own plans for prepaid medical care? Surely the leaders of medicine can see the wisdom of establishing proper precedents now.

I have attempted here to present a point of view, which I think carries profound consideration for American medicine. I have not said that voluntary plans of sickness insurance will be superseded by a compulsory system. I honestly do not believe they will be. But, as my friend, A. M. Simons has wisely said, social experiments invariably establish patterns of precedent that are seldom completely reversed. In these dynamic times we have extra reason to be vigilant.

The future faces American medicine. Precedents are being established that will have permanent influence on the system of medical practice in this country for many years to come. From the leaders of thought in organized medicine the highest order of statesmanship and sound judgment is needed.

NOTE: The above address was presented at the annual meeting of the Board of Chancellors of the American College of Radiology in Chicago, February 8, 1945.

THE MEDICAL QUARTER HOUR

"KEEP COOL"

Broadcasts on the timely subject of "*Keep Cool*" begin with June 25 over KTAR, Phoenix. The time is: Each Monday at 6:15 P. M. Invite your patients to listen.

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Editorials

Current Topics of Discussion

The problems of medical economics are mere spectres in the minds of most of the profession. This fact was very obvious when these subjects were discussed at the recent annual meeting of the House of Delegates at Tucson. Such a situation is readily explained at this time. Under present conditions, where people's pockets are bulging with money, there *are no* economic problems. Our busy profession who find any time to read must devote it to subjects of medicine, and articles or discussion on economics fail to attract the slightest attention. But it requires no prophet to warn us that these same old problems will plague us again when the country returns to peace.

The officers of the state association and the Council meet several times a year. They understand what these problems include. The House of Delegates have these problems discussed for a couple of hours at the yearly meeting, and then the matter is folded up for another year. The rank and file of the profession scarcely give the matter a passing thought.

Generally speaking, the following problems arise: 1. What is the Blue Cross organization? 2. Why is a Medical Service Plan to be organized by the State Association? 3. What is the Committee on Physical Fitness?

To begin with, the members of the American Medical Association have endorsed the principles of voluntary, pre-paid, non-profit health insurance, and through its various organizations have offered it and are promoting it as our main answer to the demand for compulsory Federal or State Medicine.

Three polls on public opinion have been conducted. The National Physicians' Committee has conducted a national poll, and the states of California and Michigan have conducted polls in their respective states. Through these polls it has been determined that 65% of those interrogated thought something should be done to make it easier for people to pay their hospital and doctor bills. Statistics have been arrived at which indicate that about 90% of people are capable of meeting the expense of ordinary office calls. It is catastrophic illness that needs solution, where hospitalization is required.

The Blue Cross

There are over 80 Blue Cross organizations in North America. They are all non-profit. Their principle is to keep operating expenses below 15% of money collected, and turn back at least 85% in benefits to subscribers. Their subscribers must be enrolled in groups, with premiums collected in pay-roll deductions. In this manner, a business firm collects all the money and sends it direct to the Blue Cross office. Most of the bookkeeping is done by the firms enrolled and in this manner the Blue Cross organization is able to keep down its overhead. It is impossible to take on single subscribers.

The Arizona Blue Cross Hospital Service has been in operation since last November. It already has over 10,000 subscribers. It is under the able management of Mr. L. Donald Lau, executive director. Its rates are 85c a month for a single person and $2.00 for a family regardless of size for those who are dependent on the subscriber. It provides 30 days hospitalization out of each calendar year for each member of the family and includes routine laboratory work.

Medical Service Plans

Medical Service Plans are in operation, or in the process of operation, in about 20 states in the Union. They are organized and operated directly by the state medical societies of the various states. They are operated very similar to the Blue Cross and, in many instances, in conjunction with them. Subscribers are enrolled in groups with the premiums collected by pay-roll deduction. Subscribers must be within certain maximum incomes, usually below

$2,500 a year. The rates are about the same as the Blue Cross rates. Fee schedules are set up for the services rendered and are paid directly to the physician—very similar to the method of the Industrial Commission in this state. The simplest plan is to start out and cover surgical and obstetrical care in hospitals only. After the plan is well established, the benefits may be widened to include other services. If we have a Blue Cross Plan and a Medical Service Plan working together we have solved the so-called catastrophic illness, which 65% of our people feel should be done. The cost of this would be about $50 a year per family, or roughly a dollar a week. To a nation which is supposed to be becoming Security minded, this would not seem an excessive amount.

Eric Johnston, President of the United States Chamber of Commerce, sounded a warning to the medical profession recently when discussing voluntary, pre-paid, non-profit health insurance. He said: "Even if this procedure is sound in principle, the medical profession will have to sell it to the public, or the politicians will come along and sell them state medicine."

There has been a great deal of buck passing coming from all parts of the profession as to who should do something about stopping socialized medicine. From the present interest in Blue Cross and Medical Service plan, it would seem that if everyone wishes to do his bit, he should follow Mr. Johnston's advice above.

The Committee on Physical Fitness

This was another subject which was new to the House of Delegates at the Annual Meeting of the same. Practically every one does know that after the Selective Service completed their first physical examinations on men in this nation between the ages of 18 and 45, they found over four million men unfit for military duty. This is known as Colonel Rountree's Report. It caused considerable furor among those who take upon themselves the task of doing the thinking for the nation. In order to do something about it, the late President Roosevelt appointed a National Committee on Physical Fitness in April of 1943. This committee realized the need for the support of the medical profession, hence with the cooperation of the American Medical Association, a joint Committee on Physical Fitness was formed. This joint committee has asked the Governors of the various states to set up state committees on Physical Fitness. None as yet has been set up in Arizona. This work is practically all in the blue print stage so far, as it is intended for a vast post-war program. The Office of Defense Transportation has, so far, prevented the holding of meetings necessary to perfect the organization.

Briefly, it is the plan of the Physical Fitness program to reach into local communities all over the country. The program is to be educational and instructive in all matters of public health. It is the plan to provide all types of facilities, including apparatus, for physical training and athletics, and to encourage every person in the nation to participate fully. Its possibilities are visionary but tremendous if fulfilled.

Fees

Paul Hoffman, President of the Studebaker Corporation, and Chairman of the Committee on Economic Planning, says, "Judging solely from what I have read, there is a problem (of high costs) which has not been fully met. . . With reduction of national income, in order to maintain automobile volume, we had to bring down both the original cost and the upkeep of our cars. Many millions of dollars were spent in market research on this problem. . . I raise the question as to whether the medical profession has made a similar survey to find out what type of service the average person requires and what he can afford to pay for it. I raise the question whether you have applied your fine professional brains to the challenge of every item of the cost of medication, including hospitalization, to make certain that you are giving the customer the best break you can for his dollar. These questions come to my mind because of my confidence that better answers can be found for them by private than by socialized medicine. If there is anything at all to the questions, I urge quick action because, if the battle for freedom is lost on the medical front, our fight to preserve free enterprise in business will be that much harder. . ."

Here is the key to the growing demand for radical change in methods of distribution of medical services. The medical profession has not, with few exceptions, accepted this challenge. The challenge is principally to the individual physician, and must be faced by each one in his

own contact with the public. Medical fees will always be thought by some to be excessive, and in point of fact they are sometimes excessive. In war times each physician is faced with the necessity for limiting his practice. There are two methods of doing this: first, the appointment method; and second, the elevation of fees.

In these times no physician is justified in using the second method. His popularity is not based on his skill or his training alone, but on the scarcity of physicians. To charge excessive fees now would be a violation of the faith of the men who have gone into the armed services. Now, with the increased volume, would be the time to reduce fees. A degree of altruism must continue to be part of the physician's code. Let the cynic take heed. The entire medical profession and the public will suffer for the failure of the few. H. R.

In Memoriam



Harlan Page Mills

PATHOLOGIST. (1873-1945)

With the passing of Dr. Harlan Page Mills, of Phoenix, on February 27th, at the age of seventy-two years, the pioneer pathologist in Arizona laid down his work and went to his reward. For thirty years he had served the profession of this state, developing the specialty of clinical and tissue pathology from nothing, so far as Arizona was concerned, when he took up his work among us, to a commanding place in the medical achievements of the state.

In 1914, Dr. A. C. Kingsley, then superintendent of the Arizona State Hospital, realizing the need for a more highly developed medical service to those patients, invited Dr. Mills, who was then pathologist for the Missouri State Hospital at St. Joseph, Mo., to become pathologist and assistant psychiatrist at the Arizona institution. This invitation was accepted and Dr. Mills served in the capacity mentioned from 1914 to 1917, with one brief interruption due to political shifts in the state government. In that interval he practiced for a year at Lamanda Park, Calif. Shortly after his return to Arizona in 1917 he was induced to become associated with the Pathological Laboratory, then a young and struggling venture in medical life of the state. His work in and with that organization and its affiliation with the two general hospitals in Phoenix, along with St. Luke's Home, made up the circle of activities in which Dr. Mills spent the remainder of his professional life.

Dr. Mills was born at Isadora, Mo., one of a family of seven brothers. He grew up and secured his premedical education in the schools of that vicinity. He graduated in medicine in 1902 from the Marion Sims-Beaumont Medical College, afterwards the St. Louis University School of Medicine. He served his internship at the Ensworth Hospital, St. Joseph, Mo., where he met Miss Maude E. Benton who was a nurse at that institution. They were married on October 14, 1903, and located at Sheridan, Mo., where Dr. Mills engaged in general practice for several years, and where his two sons were born. For about one year he was associated in practice with his brother (Dr. O. P. Mills) at Grant City, Mo. His bent toward pathology was manifest by this time as shown by one paper produced while at Grant City (Leukemia, with report of case, March, 1909. In 1909, he accepted the position of assistant physician at the Missouri State Hospital No. 2, at St. Joseph, and was later advanced to pathologist, in which position he served until moving to

Phoenix. During this time, in conjunction with another member of the staff, he published the report of a remarkable case which gained wide publicity as "a human hardware store." (J. A. M. A., Jan. 21, 1911 ; this patient, a woman, was found at necropsy to have 1446 different articles of hardware in her stomach, teaspoons, dozens of nails, tacks, pins, and so forth.)

Shortly after becoming associated with the Pathological Laboratory, Dr. Mills started clinical laboratory work at St. Joseph's Hospital in Phoenix, at first bringing all specimens to his office, and later doing the examinations in the hospital with his own microscope which he carried back and forth. From this humble start, the laboratory department of this hospital expanded until it reached such proportions that a full time pathologist was reqqired to direct it. The same development took place at the Good Samaritan Hospital,—then the Arizona Deaconess Hospital,—where clinical laboratory work was started on a shoe-string and developed through the years until it, too, required the services of a full-time clinical pathologist. Dr. Mills was made consulting pathologist for each instituiton upon his retirement from active direction of their pathologic departments. He was also made an honorary member of each hospital staff, in recognition of his more than twenty-five years of service as head of their respective departments.

Dr. Mills lost his first wife from pneumonia in April, 1924. In 1926 he married Mrs. Landonia Thompson, of Phoenix, who survives him. The two sons of his first marriage also survive, along with four grandchildren. The sons are Clarence B. Mills of Phoenix and Roscoe Mills of Dayton, Ohio.

The family was associated with the First Methodist Church of Phoenix, where his quiet, faithful attendance and wise counsel marked him as one of their leading members. He was chairman of their official board for several years. He was a member of the Kiwanis Club, the Arizona Club and the Chamber of Commerce. Outside of his professional work, his interest was in quiet cultural pursuits, his home with its flowers and shrubbery, music and reading and a citrus grove in which he took considerable pride.

He held membership in the Maricopa County Medical Society of which he was president in 1920, the Arizona Medical Association, Southwestern Medical Association, fellow of the American Medical Association, member of the Radiological Society of North America in which he held the office of counselor for Arizona for many years, a Fellow of the American College of Physicians. He was a diplomate of the American Board of Pathology. Dr. Mills trained himself in radiology and was known almost as well in that specialty as in pathology. He suffered injuries to his hands from his x-ray work, these giving him much trouble in his later years. He was not a prolific writer of medical articles, but did write or collaborate in producing some eighteen or more published articles listed below. These articles reflect his interest in the unusual, his careful study of useful clinical laboratory procedures, or his collaboration with other workers.

His physical disability was cardiovascular, arising from an arteriosclerosis of obliterating type. Symptoms of arterial closure of blood vessels had given warning several times during past years of what might occur should similar lesions develop in vital areas. He had suffered a sudden attack of Menier's disease with resulting deafness some years ago; later a sudden paralysis of the left diaphragm developed; arteries in one or more fingers closed causing painful Buerger's syndromes. A finger was amputated and histologic study revealed the characteristic endarteritis obliterans. Doubtless similar arterial occlusions brought on the final fatal illness, which culminated in decompensation and pulmonary edema.

Dr. Mills won the respect of his wide circle of friends. This respect grew into an abiding affection on the part of those who were closely associated with him in professional work or social contacts. Through the years his poise and courtesy, his consideration for others, his attention to detail and his excellent judgment in his work, his cultural appreciation of music, art and literature, marked him as a Christian gentleman, a scientist of no mean achievement, a sympathetic friend, as well as a loving father and husband. A void is left which will remain, as we mourn the passing from further visible contact of a friend and co-worker.

W. W. W.

MEDICAL ARTICLES BY DR. MILLS
AS AUTHOR OR CO-AUTHOR

Leukemia, with report of a case (with O. P. Mills.) Medical Herald, St. Joseph, Mo., March, 1909.

Foreign Material in the Stomach (A human hardware store). (with Vandivert.) Jour. A.M.A., Jan. 21, 1911.

Pellagra. Jour .AM.A., March 22, 1913.

Syphilis of Nervous System. Ariz. Med. Jour., Oct., 1915.

Laboratory Study of Cerebro-spinal Fluids, Southwest. Med., April, 1919.

Pathologic Diagnosis of Diseases of the Appendix. Southwest. Med., Dec., 1920.

Linitis Plastica. (with E. P. Palmer and Watkins), Surg., Gyn. and Obs., Sept., 1921.

Familial Muscular Dystrophy, case reports. (with Haines and Sessions). Arch. Neur. & Psych., Jan., 1924.

Causes of Death in Burns. Southwest. Med., March, 1925.

-ray Shadows of Secondary Infection in Lung Tuberculosis, (with Watkins). Radiology, Mch., 1925, also Southwest. Med., Mch., 1926.

Hospital Organization, — laboratory service. Southwest. Med., Mch., 1926.

Pathology of Acute Appendicitis. Southwest. Med., Feb., 1927.

Localization of Foreign Bodies in or About the Eyes. (with Watkins) Radiology,A pril, 1927; also Southwest. Med., Nov., 1927.

Chronic Appendicitis,—pathology and x-ray diagnosis. Southwest. Med., Dec., 1927.

Endothelioma Involving Waldeyer's Ring. (with McLoone). Southwest. Med., Sept., 1928.

Routine Cholecystography (625 cases). (with Watkins). Radiology, Aug., 1928.

Nephritis. Southwest. Med., April, 1930.

Cerebrospinal Meningococcic Meningitis,—specific treatment. Southwset. Med., Dec., 1931.

The Neutrophile Leucocyte. Southwest. Med., Aug., 1932.

Blue Cross Progress In Arizona

L. DONALD LAU, Executive Director

In 1937 Blue Cross Plans had 534,745 participants enrolled nationally. Today there are over 18,000,000 participants who have enrolled voluntarily in the 84 Blue Cross Plans which now provide nationwide coverage. This rapid growth in less than nine years definitely seems to indicate that Blue Cross has matured and can no longer be considered as an experiment.

Arizona Blue Cross, in the first six months of operation, has enrolled over 10,000 participants, indicating that prepaid hospital service is filling a great need in Arizona and that there is a definite and active demand for this service.

Of the 122 groups enrolled to date, those having over a hundred participants are: Arizona Industrial Commission; Southern Arizona Bank; J. C. Penney Co. of Phoenix; St. Joseph's Hospital; Poston War Relocation Center; Tucson School Teachers; State O. P. A.; Aluminum Co. of America; St. Monica's Hospital, Arizona Brewery; Marana Army Air Field; Tucson Medical Center and Western Farm Management Co. Those having from fifty to a hundred participants are: Arizona State College; Peterson, Brooks, Steiner & Wist, Phoenix; Tempe Grammar School; Good Samaritan Hospital; Creighton School; J. C. Penney, Tucson; Madison School; Pullman Company, Tucson; Osborn School; St. Monica's Nurses; Grabe Electric Company; Mesa High School; Tucson Title & Insurance Co.; Martin Drug Co.; District No. 2 Arizona State Nurses; Mesa Grammar School; Maricopa County Welfare Board; and North Phoenix High School. In addition to the above there are 57 groups having 25 to 50 participants and 53 groups having 5 to 25 participants. These groups represent all types of employment and incomes range from that of a store clerk to a bank president.

Our financial experience has been excellent as compared to the first six months operation of other Plans. The initial capital supplied this Plan has been repaid and it is now entirely self-supporting at the end of this short period of operation. The April statement shows payments to hospitals to April 30 to be over $6900. For the month of April alone, 58% of our income was allocated to hospital payments. The administrative expense was 32% of earned income and 10% was distributed to contingency, hospitalization and operating reserve funds.

The national financial experience for 1944 reported 77% of earned income for hospitalization, 13% for administrative expense and 10% going into reserves. Blue Cross standards require a new plan to confine administrative expense to 30% the first year and reduce this monthly until at the end of three years it will be 15% of earned income or less.

Prospects for the future can be judged by our large initial enrollment, our financial experience, and the ever increasing number of requests for information. The number of queries from all parts of the state are increasing daily from employed groups, schools, clubs and associations, who are requesting our field representatives to explain the plan to them. The splendid cooperation we have had from hospitals, members of the medical profession and civic leaders has been of incalculable aid in extending this Arizona Blue Cross Plan.

UNITED PUBLIC HEALTH LEAGUE DIRECTORS MEET

Directors of the United Public Health League held their annual meeting in Salt Lake City on March 17, with directors present or represented from Arizona, California, Colorado, Idaho and Utah. (Director J. L. Robinson of Nevada was snowed in and could not fly to the meeting.) Also present as invited guests were the members of the Council of the Utah State Medical Association. Dr. Jess Hamer of Phoenix attended.

Chairman Murray presented Mr. James J. Boyle, Washington, D. C. Representative of the League, who reported on the Washington situation. Highlight of his report was the fact that the trend for social legislation in Washington seems to have passed its peak and started downhill. Major emphasis is now on winning the war, with social problems left for later consideration. Directors approved his report and instructed him to support several pieces of pending legislation, particularly the deferment of medical students and the creation of a cabinet post for a Secretary of Public Health.

Directors of the League offered many suggestions for extending the scope of activities and adopted a resolution to request the official participation of other Western States in the League. These States include, Oregon, Washington, Montana, New Mexico, Wyoming, Kansas and Nebraska. Doctor R. F. Peterson, Secretary of the Montana State Medical Association, attended the meeting as an observer.

Election of directors resulted in the re-election of all directors except Doctor George Lingenfelter of Colorado, who retired because of poor health. Doctor Bradford Murphey of Denver was unanimously elected to succeed him. Mr. Boyle continues as Washington Representative, with the cooperation of Mr. Ben H. Read and John Hinton continues as Executive Sec-

J. D. H.

HEADQUARTERS PANAMA CANAL DEPARTMENT

Office of the Department Public Relations Officer

Success of the fight against venereal disease among the troops of the Panama Canal Department is reflected in the annual report for 1944 recently issued by Col. Wesley C. Cox, Department Surgeon and Venereal Disease Control Officer, which shows a new low rate of 2.09 per cent. This rate is less than one-half of the previous annual low of 4.27 established in 1943 and considerably under one-third of the 6.6 per cent recorded in 1940, the first year in which large-scale control campaigns became necessary. Contributing to the 1944 record low was a rate of 1.4 per cent attained in the final month of the year.

Reports for the first two months of the present year show a still further decline to a rate of 1.8 per cent, which gives Army venereal disease control officers a basis for setting the goal for 1945 at two per cent or less.

Contributing to this favorable average, which is substantially lower than that for the continental U. S., is the cooperation between Army and Republic of Panama heal the officers in a thorough program which eliminates sources of infection.

Starting with Brig. Gen. Henry C. Dooling, Chief Health Officer, The Panama Canal, and Surgeon, Caribbean Defense Coommand, who acts as liaison officer between the Army and the civil authorities, the campaign is carried on under the direct supervision of Col. Cox. Medical officers of the Sixth Air Force, Panama Mobile Force and Security Command, Coast Artillery Command, and Department overhead units in turn direct the work in their own organizations with the assistance of officers and noncommissioned officers down through the corporal of the squad.

In addition to its organized program of instruction and indoctrination of troops, the Army employs the private physician and patient relationship in cases of military personnel whose records show frequent exposure to potential sources of infection. Such individuals receive direct counsel from their respective medical officers, all of whom use a sympathetic approach in pointing out the deleterious effects of venereal disease upon the mental and physical faculties.

Control of venereal disease is made a responsibility of command under the Army program. Commanding officers down to the lowest grades are charged with getting across to their troops the Department Surgeon's slogan, "A clean and healthy body is but a small contribution to our country in this time of need."

The need for and value of moral cleanliness is impressed on the troops through periodic lectures and photographic displays with emphasis on reaching each individual directly. Causes and effects of venereal disease are vividly explained through the media of informal talks, demonstrations and clinical exhibits. The necessity of chemical cleanliness is especially stressed whenever moral cleanliness fails. Supporting the entire program is an extensive schedule of recreational activities and educational facilities provided by the Army to occupy the off-duty time of troops.

Cooperation by the Republic of Panama is under the direction of Dr. Guillermo Paredes, Director of Public Health, who works in liaison with Gen. Dooling in locating suspected sources of infection, and provides for examination and treatment of infected women, both in the Interior and in the terminal cities. Dr. Forrest E. Brown is Venereal Disease Control Officer on Gen. Dooling's staff while Dr. Sidney B. Clark works directly with Dr. Paredes.

Infected women are located through the routine reports required by the Army from military personnel applying for treatment. From the descriptions and personal data shown on these reports, the Army and Republic health officers are able to locate diseased wmoen promptly and to place them under treatment. Clinics are established in the Interior where the women are kept in custody until treatments are completed. The republic also maintains clinics in the principal cities of Colon and Panama together with the National Institute for the Control of Venereal Disease among Women. In addition, the government officials promote a system of education and control over the morals of the Republic's youth.

HOW TO GET MEDICAL RECORDS OF DISCHARGED VETERANS

Obviously, those who are being discharged from the armed forces and who are returning to civilian pursuits will at some time or other seek the advice of or treatment from physicians in civilian practice. In handling such cases, the civilian practitioner will be handicapped without a health and medical history of the person while he was in military service. Review of case histories is a fundamental requirement of good practice.

"What can I do in such cases?" the attending physician asks.

Here is the answer.

The War Department has issued a regulation (No. 40-590) authorizing the commanding officer of any hospital where a member of the armed forces may have received treatment to release information from his or her medical record to "registered civilian physicians, on request of the individual or his legal representative, when required in connection with the treatment of the member or former member of the armed forces." It is stipulated that it is expected that the information given will be treated as confidential,. as is customary in civilian medical practice.

It probably is safe to assume that the Navy Department and the Veterans Administration will co-operate in similar fashion.

Therefore, in dealing with the ex-servicemen and -women, the attending physician should explain to them the need for this information, how it may be obtained, and suggest that the record be secured for his review so he will be better equipped to offer good advice and competent treatment. By doing so the physician will be benefiting the ex-servicemen or -woman as well as himself.—*Ohio State M. J.* Nov., 1944.

RISK OF INFANTILE PARALYSIS NO GREATER IN ARMY THAN IN CIVILIAN LIFE

Despite the huge concentration of men brought together from all parts of the country in Army posts and the combat conditions under which great numbers are living, there is apparently no more danger in the Army from infantile paralysis than there is in civilian life.

The Office of The Surgeon General reports that the number of cases was 3.4 per 100,000 troops in this country in 1943 and 4.0 in 1944. The case fatality rate was 12.1% in 1943. This is similar to the civilian rate for similar ages, and there is a further similarity in the time of year the cases occurred and their geographical location.

There has not been an epidemic of infantile paralysis at any Army post during this war.

THE SCHOOL-CHILD'S BREAKFAST

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum. Pablum furnishes protective factors especially needed by the school-child—especially calcium, iron and vitamin B complex. The ease with which Pablum can be prepared enlists the mother's cooperation in serving a nutritious breakfast.

MEAD JOHNSON & COMPANY,
EVANSVILLE, INDIANA, U.S.A.

ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

Directory

ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892

423 HEARD BUILDING, PHOENIX, ARIZONA

OFFICERS AND COUNCIL

Charles P. Austin, M. D. (1949) Morenci
President

George O. Bassett, M. D. (1950) Prescott
President-Elect

John W. Pennington, M. D. (1946 Phoenix
Vice-President

Frank J. Milloy, M. D. (1946) Phoenix
Secretary

C. E. Yount, M. D. (1946) Prescott
Treasurer

F. W. Butler, M. D. (1946) Safford
Speaker of the House

Jesse D. Hamer, M. D. (1946) Phoenix
Delegate to A. M. A.

D. F. Harbridge, M. D. (1945) Phoenix
Chairman, Medical Defense

District Councilors

Robert S. Flinn, M. D. (1947) Phoenix
Central District

A. C. Carlson, M. D. (1946) Jerome
Northern District

Hal W. Rice, M. D. (1948) Bisbee
Southern District

Councilors-at-Large

Dan L. Mahoney, M. D. (1948) Tucson
O. E. Utzinger, M. D. (1947) Ray
E. Payne Palmer, M. D. (1946) Phoenix

COMMITTEES*

Scientific

Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.

Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

Scientific Assembly—Charles P. Austin President-elect and Chairman (1945), Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

Scientific Education and Postgraduate Activities—A. H. Dysterheft (1946), McNary; A. I. Podolsky (1947 , Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; C. E. Yount, Prescott; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946 , Phoenix; Donald F. Hill (1945), Tucson.

* Terms expiring in 1945 will hold until 1946.

President's Message

At this time I shall give you a brief outline of such program and policy as I have in mind for the coming year.

First, all policies and programs are in reality those of the Council as a careful reading of our By-laws will show. The officers and all committees lay their programs before the Council for its approval, and the Council, in turn, asks the recommendations and support of the House on any program not designated to the Council alone. Your president is the guiding hand, during his administration, to see that the programs and policies of the Council and House are fulfilled. That shall be my duty—to follow the bidding of the Council and the House.

Second, our Assoeiation is not a one-man leadership organization but one of a fourteen-way direetion, as there are that number on our Council. It has been the custom of Councils, at the recommendation of the President who has the responsibility of nominating members to service on the seientifie eommittees, that our seventeen committees be representative of our entire fourteen counties. This brings our entire membership into representation on the board of officers and counties. It has also been the policy, from my observation for the Council to be representative of our three districts and that is also as it should be with smaller counties represented along with the larger ones.

Thus I would say, that our polieies have been and will continue to be based on the direction of the entire membership through these officers and committees.

For the year ahead, our business in Annual Session points the way. Our main business items will be: 1. The formulation of a possible Medical Service Plan for Arizona with the Committee on Medical Economies directing the diseussion as based on their reeent studies: 2. Legislative matters to be presented by the Commit-

tee on Public Policy and Legislation. Incidental matters may also arise. If there is time I would like to see our membership keep up with their scientific studies. With the scientific session of the Annual Meeting discarded this year by Washington edict even though our program would have been of postgraduate nature dealing with war-borne diseases and presented by instructors from the Baylor University College of Medicine — I feel we should devise some ways and means for exchanging scientific meetings among our various county medical societies or something of the sort for scientific refreshment. This could be laid before the Committee on Scientific Education and Postgraduate activities to work out for us early in the year. 3. A Public Health Education Program is in force and will be expanded.

The committees concerned presented their recommendations which were adopted by the Council and House and whch are printed in this Journal for your information

I am told that every county society responded to the fullest measure when called on to aid during the legislative session just closed. This is as it should be and we may feel proud indeed that such interest is evoked by all of our groups.

Let us work to the end that we shall always have a full participation in all of our activities by all of our members through all of our county societies. In that way we may bring to the people in all sections of this state a full measure of medicine at its best, privately practiced and professionally administered through our Association.

Fraternally,

C P Austin MD

President.

REPORTS OF OFFICERS AND COMMITTEES

OFFICERS

Report of the President

During this term as President, it has been my custom to publish the "President's Message" in Arizona Medicine beginning with the November, 1944, issue. Prior to that, the President's address was published in the May issue, and the report of the Council for its July meeting in the July issue. The Address and the subsequent messages cover the activities and recommendation of the President. They are included with this report for filing with these Minutes.

As to committee activities, I would like to state that all committees will not have reports for this session, due to the fact that some have not been active. This has been due to no fault of their own, as these committees are set up to serve the various departments of the state government who have not called on them for advice or assistance during the year. I refer to such committees as those on: Syphilis and Social Diseases, Tuberculosis Control, and State Health Relations. Attention of all state departments was called to these committees and we were assured that they would be called on during the year for advice and assistance in their respective fields. Such has not been the case. In addition, the Seventeenth Legislature was given a special printed sheet of all Association committees, with a message to the legislature that these committees would be pleased to assist in any legislative on related health matters. Again the association committees were not called upon even though there was legislation on which none but physicians could be well enough informed to advise as to the medical aspects of the same. I refer especially to legislation having to do with expansion of tuberculosis facilities—which was not enacted but which may come up again for legislative consideration.

Ways and means should be found for bringing these committees more forcibly to the attention of the various state bodies concerned with medical problems. Letters to such heads have brought replies but no action.

As president, I made one trip to Phoenix during the legislative session and interviewed some of our legislators and, with the Committee, took a look into matters to see what more the Association could do or should do in regards to the legislation we were sponsoring. I wish to take this opportunity for congratulating the Committee on its effective work during this past legislative session.

I wish also to thank the members of the Council for their diligent attention to duty as a 100% attendance at all Council meetings is always the order of the day unless a member chances to be ill or out of the state. That ras seldom occurred.

I urge your attention to committees reporting here today as a considerable program of expansion is to be proposed thereby.

Respectfully submitted

DAN L. MAHONEY M. D.

Report of President-Elect

The chief responsibility of the President-Elect is to head the Committee on Scientific Assembly which provides the program for the scienific sessions of the Annual Meeting.

Our Committee recommended to the Council, and the Council approved, that we follow last year's procedure and invite a group of instructors from a not too distant first class medical college to present the progrm for us. An invitation was extended to Baylor University and they accepted and outlined what we considered an excellent program. You saw the tentative outline of the program in various issues of the Journal

As we were all prepared for putting the final touches to the program, the Office of Defense Transportation clamped down on meetings, with over 50 in attendance, unless such meeting was in the war effort. The Council voted to petition te ODT for permission to hold the meeting as we felt the meeting *was* in the war effort since the papers to be presented were largely on war-born diseases. Nevertheless, the ODT denied the request.

We are pleased to report that our efforts were not entirely in vain, as the group of instructors proved themselves to be true professional men by supplying us with the papers they had planned to present. Hence in the ensuing issues of the Journal you will read four excellent papers which you have heard at this meeting had the scientific session and the larger attendance been permissible.

It has been my pleasure to have attended all meetings of the Council during the year and to have given some assistanee to the Committee on Public Policy and Legislation with key men from our district Others have done as much, and it is the united effort that counts.

Respectfully submitted,

CHARLES P. AUSTIN, M. D.

Report of Vice President

The Vice-President of the Association has little to do of an official nature unless the President should be absent from the state or become incapacitated. Fortunately this has not been the case, so the Vice President has rested on his oars while the President has mapped out the course.

As an officer, I have attended the sessions of the Council and have enjoyed this mutual participation in the activities of this association I regret, along with the membership, the fact that we can not have a scientific program this year for I have always fully enjoyed and appreciated this annual scientific refreshment. We do, however, have full programs for the consideration of the Council and House and we should thereby also be refreshed and brought to the realization of the high aims of organized medicine and the medical profession as such.

Respectfully submitted,

WALTER BRAZIE, M. D.

Report of the Secretary

The Secretary of the Association begs to report that he has attended each meeting of the Council since the last Annual session and that he also attended the conference of Secretaries and Editors of state associations as held by the American Medical Association at Chicago each November.

The report on the Chicago session of secretaries and editors was publised in Arizona Medicine and will be appended hereto for the purpose of filing with the Minutes.

The routine duties of the secretary, collection of annual dues, compilation of membership roster, and the like, are dispatched through the medium of the central office. That office serves as a "buffer" for the secretary, as well as for other officers and committees, by attention to details which, as practicing physicians, we have little time for these crowded days That office keeps us fully informed as to activities, out of routine nature as well as those of routine.

Under the head of New Business, I shall take up certain points raised at the Chicago conference, and brought to my attention since then, on Post War Medical Activities. I shall not repeat here my report on that conference but have it here for reference if you wish to hear any part of it at this time.

Respectfully submitted

FRANK J. MILLOY, M. D.

Secretary

Report of the Treasurer—Summarized

TOTAL CASH - GENERAL FUND			$ 8,036.67
TOTAL CASH - MEDICAL DEFENSE FUND			4,345.68
TOTAL CASH ON HAND			12,382.35
CASH - Bank of Arizona	8,036.67		
General Fund	2,773.95	10,810.62	
CASH - Yavapai Savings Bank			
Medical Defense Fund		1,571.73	
TOTAL CASH ON HAND			12,382.35
INVESTMENTS - U. S. Defense Bonds			
Medical Defense Fund		31,000.00	
General Fund		5,000.00	
			36,000.00
TOTAL CASH AND INVESTMENTS - APRIL 7, 1945.....			48,382.35

* *RECOMMENDATIONS*— I recommend that the dues be not raised, and that no money be pro-rated for Medical Defense for the year.

Respectfully submitted,
C. E. YOUNT, M. D., *Treasurer.*

* Recommendations adopted by the Council and the House.

Report of The Editor of Arizona Medicine

The Journal has been proceeding on a hand to mouth existence. By this I mean that we started out January, 1944, when *Arizona Medicine* came into being, without any backlog of material for publication. We still have no accumulation of papers - although I might add that I have a fairly good list of papers promised.

At the beginning I would worry some about where the material for the next issue was coming from, but so far enough has always managed to creep in by the end of 60 days. Cancellation of the clinical program this year has been a blow, but we have been promised one paper by each of the men we invited from Baylor University which will help immeasurably and which is sincerely appreciated.

If you have noticed, we have a nice long list of advertisers, and the amount of advertising has been increasing with each issue. It has reached the point where we could carry more clinical material

You know, an Editor gets some funny ideas after he edits a Journal for a time. At times it seems that no matter how many articles you publish or how excellant reading they make, no one goes to the trouble of reading any of them. So what is the use of publishing a medical journal! Morris Fishbein says he has the same trouble. He says from the best of his knowledge, doctors read the "Tonic and Sedative" column then turn to the obituary column to see if anything has happened to their competitors.

There is one person, besides the editor, who profits by having a medical journal published and that is the man who prepares a paper for it. So I am inviting each one of you, individually and collectively, to write a paper for *Arizona Medicine.*

Signed,
FRANK J. MILLOY, M. D.

COMMITTEES

MEDICAL SERVICE PLAN FOR ARIZONA

Report of Committee on Medical Economics *

The committee on Medical Economics (Drs.: Meade Clyne, Tucson; C. E. Patterson, Tucson; R. S. Flinn, Phoenix) was instructed by the Council to canvas the membership and seek their opinions as to: a. whether now might be the time to promote a Medical Service Plan for Arizona, and b. whether such a plan should include both surgical and medical care, or surgery and obstetrics only in an initial plan.

The Council was promoted to request this study in order to bring past studies up-to-date, and because of the inauguration of a Blue Cross Hospital Service Plan in Arizona.

Letters were therefore sent by the Committee

to all members asking the two questions mentioned in the first paragraph above, and sending each a brochure on "Non-Profit Medical Service Plans" now in operation in various states and cities with the Blue Cross cooperating in some phrase of the administration of the plans outlined.

Replies were received from approximately one-third of the membership. Members from county society responded which gives a good cross section reply even though the response was not what it should have been from physicians in the more populous areas especially.

BREAK DOWN OF REPLIES

"Yes" Replies were predominate, the general response being that now is the time to inaugurate a Medical Service Plan in Arizona.

"No" Replies were in the minority — only 3 in all.

A few were uncertain.

Of those replying "yes" to the need for such a plan, all agreed that surgery and obstetrics should be included from the outset, and that medical care should be added later if not included at the outset.

The Michigan Plan was the one most frequently cited as a good pattern.

Physicians from Rural Areas say the plan should be "practical, efficient, state wide, and reasonable in cost to subscribers". It was also stated by these physicians that such plans usually worked better in urban areas but that rural populations needed them as much as others.

Whether plan should include both medicine and surgery: Consensus of reply was that thinking in terms of service to individuals *all services* should be included, but that in thinking of problems of administering the program, perhaps only surgery and obstetrics should be included at the outset. (Michigan again cited for its experience in this respect.)

"No" Replies: Feel that need for such a plan has not yet been established in Arizona. The problem is more of a social and economic one than medicine. Increases the physician's work but lowers his income because fees would be lowered. Puts control with lay group. (This was an erroneous opinion as such plans are directed by medical officers. The Blue Cross Board of Directors is one-third physician members. one-thirds hopital representatives, and one-third lay).

Whether or not a medical service plan should be administered in part by the Blue Cross Service will be discussed by this house for the further guidance of the committee and council.

Questions for Consideration

In order to have experienced replies to the following questions, Mr L. Donald Lau, executive director of the Blue Cross Hospital Service Plan for Arizona, will give his views on the following pertinent points:

1. In a number of states, the Blue Cross administers both the hospital and medical service plans. Could you tell us how this is done so far as medical service is concerned? That is what part of the administration falls on the Blue Cross and what part on the medical organization?

2. What would be an estimated cost for administering a medical service plan in Arizona under such a joint arrangement?

3. In securing subscribers to the hospital service plan do you have any calls for medical service plans to go along with your service? This will aid in determining how soon Arizona might be ready for a medical service plan.

4. Should a medical service plan be inaugurated in Arizona, and should this Association desire the Blue Cross to assist in administration, how long a period of time would Blue Cross service need to be prepred to assist? How much of a personnel would our Association need, in your opinion, for conducting its part of such a joint service?

Recommendations of Committee

1. That a summary of the findings on the above questions of administration, and the recommendations of this Council and House be mailed the membership with the request that they give further recommendations on these points. A copy of a model medical service plan should also be included for their future study.

2. Since Colorado is westren and has problems similar to Arizona, and since Colorado also has a successful medical service plan, the Committee recommends that the Association either defray the expense of some officer or committee member to go to Denver and get first hand information on their set-up, or that Mr. MeNary, their

head, be invited to come here and meet with the Council and Committee to give needed information. Mr. McNary is an official of the Hospital Service Plan Commission of the American Hospital Association and might include Arizona on one of his itineraries. Or such information as needed might be procured by correspondence if this expense is not deemed feasible.

Enabling Legislation

No proper law exists in the state at this time under which a non-profit medical service plan would operate. An Enabling Act would seem to be in order. The Committee on Public Policy and Legislation has laid a draft of a sound enabling act before an experienced attorney in these lines to learn whether or not such a law would be controversial to those who, in the 1943 session of the legislature, saw to it that the former non-profit provision in the Code was nullified while a Mutual Benefit Insurance Act was enacted. The Committee on Legislation will report their findings as to the possibility of securing the passage of an Enabling Act with our state legislature.

Conclusion

The Committee studies, to date, have been concerned with generalities, and possible costs of operating and administering such a medical service plan. The problem on these points is: Where and how to raise the funds necessary to initiate such a program.

Medical aspects of such a service plan are not being reported on at this time. Several successful plans are in operation in other states that may serve as guides when this Association is ready to formulate its specific plan. Arizona is still a small state, industrially speaking, but it is the general feeling that if a hospital service plan can succeed, a medical service plan may also.

The subject is now before the Council and House for discussion and further study.

* Recommendations adopted by the Council and the House.

Signed,

COMMITTEE ON MEDICAL ECONOMICS

Meade Clyne, M. D. Chairman, Tucson

C. E. Patterson, M. D. Member, Tucson

Robt. S. Flinn, M. D. Member, Phoenix

REPORT OF COMMITTEE ON PUBLIC HEALTH EDUCATION *

Review

The Council and House, Annual Session, 1944, voted funds to the Committee for weekly broadcsts as follows:

Three series of weekly broadcasts, day time rates, over the Arizona Network (KOY, Phoenix; Bisbee; KTUC, Tucson). The series of 13 programs each were: "Before the Doctor Comes,,, "Dodging Contagious Disease", "Live and Like It". The response to the first two series (transcribed interviews) was excellant while response to the third series (dramatized and transcribed) was less. It was our opinion that the third series contained too little health information, yet not sufficient drama to satisfy the usual 'addict' to radio drama. These programs cost $18.84 each broadcast.

The Council, at its session in December, 1944, authorized the Committee to transfer its program to KTAR, Phoenix, of 5,000 watts capacity and to an evening hour which requires a higher rate o fpay. KTAR was desired as a recent survey by a national firm showed this station to have a grater listening audience at the time available than the other Arizona networks or stations.

Over the Arizona Network mentioned above, the daytime hour of 10:30 each Saturday morning was used with good results as the programs appealed especially to mothers. Over KTAR, the committee has bought the hour of 6:15 each Monday evening for a full year beginning with last January 22nd. This is at a cost of $24.00 for each broadcast.

$1,080.61 has been expended for radio programs since the last annual meeting.

As further public health education, the Committe has used the two daily papers of Phoenix, the two dailies of Tucson, and the Bisbee Review of Bisbee to advertise the weekly radio programs. The papers seemed pleased with this recognition. $116.24 has been expended in this manner to date.

Still futhering our programs, the Committee has printed 10,000 pamphlets listing the radio programs from January 22 through September 10, 1945 These are for mailing to the public and for distribution through physician's offices preferably from their waiting room tables. The pamphlets are being 'doled' out for such dis-

tribution to make them effective through the entire series as contracted rather than exhaust them in the first weeks of the broadcasts. This expenditure was $65.50, exclusive of postage cost for mailing.

Recommendations of Committee to Council and House

1. Continue weekly programs over KTAR as contracted until January 22, 1946 and add KVOA, Tucson, beginning immediately and continuing through 1945. This will be at a cost of approximately $40.00 per program as compared to the present $24.00. We recommend the Tucson station as it has a 1,000 watt output where the other stations on this network (Globe, Jerome, Prescott, Safford, Yuma) have but 250 watts each. Other stations should be added gradually, in the opinion of the committee in view of other recommendations.

2. Institute weekly series of health articles in the leading papers of the state (all dailies, and each county weekly). These articles would cover seasonal health articles, and timley social and economic subjects. For example, seasonal health articles would include such subjects as: The Common Cold, Infantile Paralysis, Contagious Diseases, and the like at the season of the year when most prevalent. Social and Economic articles would cover pending state and national legislation relating to health but never in a controversial manner and other medical matters of interest to the public,—always presented in a non-controversial manner.

The Committee on Public Health Education includes the Press, Radio, and Fraudulent Medical Advertising. We have a sound start for the Radio. The Committee is suggesting item 2 in the recommendations to bring press relations up to date. Fraudulent Medical Advertising may be effectively woven into the programs of the press as it has beeen done in the radio programs through broadcast on, "Dangerous Drugs in the Home", and "The Use and Misuse of Prescriptions."

3. To carry out such a program for 1945-1946, the Committee is asking for a minimum of $3,000. The forthcoming changes in the national aspects of medicine, scientifically and economically, necessitates some such an expanded program for public health education in Arizona.

* Recommendations adopted by the Council and the House.

Respectfully submitted,

COMMITTEE ON PUBLIC HEALTH EDUCATION

H. L. McMartin, M. D. Chairman, Phoenix

Geo. O. Bassett, M. D. Member, Prescott

J. S. Gonzales, M. D. Member, Nogales

Paul H. Case, M. D. Member, Phoenix

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION*

THE FORMAL REPORT of this Committee was published in the May issue of ARIZONA MEDICINE. A copy of that number is in your hands, of course, and a copy was also mailed to each member of the Seventeenth Legislature.

The bill to amend the Medical Practice Act and strike the osteopath from that board and substitute a doctor of medicine and surgery in his place—in as much as the osteopaths now have their own board—was not taken up by the House in the final ruch. The Senate passed this amendment unanimously and the House assured us they would do the same but by what they called a "fluke" the bill did not come out for House vote. Since a number of other good bills met the same fate, we are willing to accept their explanation. This amendment will again be sought at the first opportunity as the osteopaths are in agreement with the amendment, hence there is no controversy.

The main recommendation of The Committee on Public Policy and Legislation is: That the Association set up a public relations fund of $5,000 for the year 1945-1946, for the purpose of defraying the cost of radio, newspaper and legislative activities of a public health nature.

Since this committee has half of its duties in carrying out the public policies of the association, the recommendation therefore covers radio and newspaper activities. This will leave the general fund for other association activities and operative expenses.

Expended for this year's legislative activities was approximately $200.00. This was used for mimeographing, printing, long distance calls,

wires and the like. No money, or reasonable facsimile thereof, was paid to a lobbyist, and it is not the recommendation of this committee that any part of a Public Relations fund be used in this manner. Success in legislation, so far as this state has been concerned, has been due to the contacts made by our own members with the legislators in their local communities, and to the program of feats to which our officers and committees have always strictly adhered. A public relations mailing list is anticipated.

As to ways and means of raising the fund suggested, and to open the discussion, the Committee further recommends that there be voted from Association funds any surplus the Council feels appropriate or possible, and that the remainder be raised by a pro-rata assessment upon the county medical societies. A county society quota would be in proportion to its membership with each county society the judge as to whether it shall raise the quota from their surplus funds, from individual assessment, or otherwise.

* Recommendations adopted by the Council and the House.

Respectfully submitted,

COMMITTEE ON PUBLIC POLICY AND LEGISLSATION

Jesse D. Hamer, M. D., *Chairman*, Phoenix

Chas. A. Thomas, M. D., *Member*, Tucson

Walter Brazie, M. D., *Member*, Kingman

RECOMMENDATIONS AND REPORT ON MEDICAL DEFENSE

The report on the legal aspects of the work of the Committee on Medical Defense will be presented, as has been the custom, by the attoorney who has the calendar of cases in hand.

Having been on this Committee since its inception, I can see a changing aspect to the situation as the years pass. It was the original plan of those outlining this defense and the fund to support it that the fund should reach a total of $50,000 before assessment for building it up would be discontinued. When reaching the $50,000 level it was thought that the interest on the investments would support the annual cost of defense.

The fund is not yet at that peak but I am not sure that it need be built up to that figure. It has been the practice of the Council and House the past few years to prorate a certain part of the dues to the defense fund, or to recommend that no part of the dues go into the fund for a current year. In other words, we have not always added to the fund each year recently. It is my feeling that whether or not the fund should be built further, should rest with the Council and the House. Cost this past year has been light so that additional funds need not be pro-rated this year unless desired by these two bodies.

It would seem, from the trend of the times, that the Association might need to be building up a closely woven program of some sort with the public—threats of socialized medicine, rehabilitation, and the like are all questions requiring public education. Physicians and surgeons of medicine are the ones who should impart such education. If there is more need for funds for such a public relations program, I am for it, for the present at least, instead of further building the defense fund.

Signed,

D. F. Harbridge, *Chairman*
John W. Pennington
A. C. Carlson

COMMITTEE ON INDUSTRIAL RELATIONS ANNUAL REPORT, APRIL 8, 1945

The Committee on Industrial Relations, as appointed by the President, Dr. Dan L. Mahoney, and approved by the Council, at the Annual Meeting of 1944 was: Drs. Carlson, Clyne, Lytton-Smith and Pennington as holdovers, and Dr. O. E. Utzinger as a member fof 1944-1945. The Industrial Commission of Arizona designated Dr. C. E. Yount of Prescott to serve on the Medical Advisory Board in addition to the members of the Association committee. It must be understood that the choice of membership for the Medical Advisory Board, as set up in the Compensation Act, is entirely at the discretion of the Industrial Commission of Arizona. It has largely been their custom to name the Industrial Relations Committee of the Association to serve in this Medical Advisory capacity, but this is entirely at their discretion.

The Association Committee on Industrial Relations is authorized by the By-laws "to represent the membership of the Association in all

questions and decisions relating to medical relations under workmen's compensation and shall enter into any arrangements or agreements with the Industrial Commission of Arizona which in the judgment of the Committee may aid in carrying out its purposes."

In the earlier days of the Committee, physicians having complaints against payment of their fees, consultations and all matters relating to their industrial patients, appealed to this Committee for clarification of any confused situation. In the recent years of the Committee, physicians have become so accustomed to the full operation of the workmen's compensation law as it pertains to industrial accidents, that few problems have been laid before the Committee by the membership at large. This speaks well for the operation of the law, but the Committee would be pleased to have more contact and correspondence with the membership from time to time as to their industrial practice and problems—just so the Committee may function fully as an Association group.

It has been the custom to hold meetings of the Committee on Industrial Relations on a Sunday preceding the Monday session of the Medical Advisory Board. This is done to save these men making two trips to Phoenix for two separate meetings for, as we have said, it has been the custom of the Industrial Commission of Arizona to name the Association committee to serve as its Medical Advisory Board. The Committee names its own secretary who attends the Sunday meetings of the Committee, taking Minutes and discharging similar routine duties. He is not, however, a member of the Medical Advisory Board which convenes for the purposes of the Industrial Commission of Arizona.

During the season just closed—(our last report outlining the Annual activities having been given on April 4, 1944 for the season closing with March 5, 1945)—the Committee on Industrial Relations has held six meetings for the year. April 3, May 7, June 4, Sept. 10, Nov. 5, and Feb. 4, 1945, were the dates of the meetings held. All meetings were held at Phoenix at the Westward Ho except for one session which was also held at Phoenix but convened at the Grunow Clinic. Attendance at the meetings is excellent, there being no absences except for such times as members might be away on vacation. By invitation members of the Industrial Commission and the claims managers are in attendance and display a keen interest in the proceedings from month to month.

No matters of great consequence came before the committee during the past year, most matters being of routine nature in connection with questions arising with the Medical Advisory Board and referred to the Committee for discussion. The meeting time for the Committee was changed from the luncheon period to the evening hour of seven thirty to afford members from out of town more time to reach Phoenix during the day. Supreme Court decisions were reviewed on several occasions especially as relating to small mine owners and their coverage under industrial compensation, and as to functional disability of injured employees. The question of distinction between general and functional disability and general permanent disability was one arising from a Court opinion which claimed the attention of the Committee. The main questions to be answered in these respects were determined to be: 1. Are further examinations or treatments indicated? 2. Is condition stationary? 3. If the condition is stationary, what is the "general" physical disability? 4. When in your opinion will the claimant be able to resume his usual work? 5. When in your opinion will the claimant be able t resume any type of work? This matter was brought to the attention of the physicians of the state by the Industrial Commission of Arizona.

It is also of interest that industrial fees were raised 20% for a period of six months at the request of the Industrial Relations Committee from the time authorized in September. The Industrial Commission notified all physicians of the state of this change.

The Committee urges the membership to lay any matter before it regarding industrial practice which a member feels should have the attention of the committee or which the member may wish clarified for his own information. The Committee on Industrial Relations is set up to serve our membership and that is what we wish to do in every way possible.

We wish to thank the membership for their consideration and wish to compliment them for their procedures with industrial cases. The Committee also wishes to thank those members of the Industrial Commission of Arizona who

have met with us from time to time and for their kindly advice and cooperation.

Respectfully submitted,
FRANK J. MILLOY, M. D.,
Secretary to Committee.

April 8, 1945

REPORT OF COMMITTEE ON AUXILIARY ADVISORY

The Committee on Auxiliary Advisory is set up to assist the Auxiliary in their activities and to request their assistance in return when association programs need the "feminine" touch.

During the past year, the Council voted $200 to the Auxiliary for its Cancer program.

The central office is at the disposal of the Auxiliary for filing its records, and for such assistance as that office is able to give from time to time. A portable, metal filing case was given the Auxiliary last fall for the use of their officers in filing their necessary materials and transportaing the same from place to place. In addition, the central office mimeographed ballot material for the Auxiliary in connection with their annual duties.

In the past, the Auxiliary have been provided badges, programs and the like for the Annual Meeting. Since the meeting was canceled this year for the Association as well as the Auxiliary, such badges and programs were not distributed to either group.

The Committee has been pleased to render these few services.

Respectfully submitted,
Geo. R. Barfoot, *Chairman,*
Florence B. Yount,
W. Claude Davis.

Questions Of Administration Re A Medical Service Plan

L. Donald Lau*

The invitation of President Mahoney, on behalf of the Committee of Medical Economics, to attend this meeting was accepted in an earnest desire to be of service to the Medical Association. Some specific questions on the adminstration of a possible Medical Service Plan were asked of me in the invitation extended. As director of the Blue Cross Hospital Service Plan in Arizona, I am happy to be in a position to reply to these questions from material our office has amassed. I shall speak on matters of cost and personnel, as I would not presume to discuss or advise on the medical aspects of such a service as you are studying. All questions asked me deal with administrative problems, only. That is as it should be.

The first question asked was, 1. In a number of States the Blue Cross administers both the Hospital and the medical Service Plans. Could you tell us how this is done so far as the medical service is concerned? That is—what part of the work falls upon the Blue Cross administrative office and what part on the Medical Association sponsoring a medical service plan?

In the States where the Medical Service Plan is administered by Blue Cross various methods are used. In Colorado the Medical Service has no employees except a part time Medical Director who serves two or three hours a week and receives a small salary. Blue Cross does all the selling, billing and administrative work, the money from the Medical Plan being placed in a separate bank account, against which checks are drawn to reimburse the psysicians.

In St. Louis, Missouri, where a new Medical Plan is about to begin enrollment, the function of the Medical Association through its Executive Committee is to pass on disputed claims and to issue checks to the participating physicians from a separate Medical Plan Account. The enrollment, billing, accounting and collection of dues are handled by Blue Cross.

The Western New York Medical Plan, with headquarters in Buffalo, is one of the oldest community-wide Medical Plans. Organized in 1940, it has had experience with Limited Surgical Benefits, with comprehensive Medical-Surgical Benefits, an dwith both of the foregoing types of contracts written on a service basis and also on an indemnity basis. The Western New York Medical Plan is administered by Blue Cross through a Service Agreement. Originally the Medical Plan employed a Director and sufficient clerical help for handling the medical claims. At the suggestion of the medical profession's own trustees the administration has been placed under the same general supervision for both plans. Under the present arrangements the Medical Plan has no separate employees of its own as all employees serve both Corporations.

The Second question—2. What would be the

* Executive Director Blue Cross Hospital Service for Arizona.

estimated cost for administering a medical service plan by such joint arrangement? We realize you would be able to give us round numbers here but would appreciate such estimates as you feel reliable.

The cost of administration of a Medical Plan by Blue Cross will, I believe, vary with the type of service agreement decided upon. The Colorado Medical Association advanced two thousand dollars to Blue Cross for the initial printing of matetrial and setting up of administrative proeedure. After the first contract became effective all costs jointly incurred have been equally shared and those costs, hospital and medical, applying directly to either plan are paid by the plan incurring them. Colorado Medical Service, with less than three years' experience, and Blue Cross, with over seven, are jointly operating at the present time at 11% of earned income.

In St Louis Missouri the agreement is, that Blue Cross is to make no profit and sustain no loss in the administration of the Medical Plan. The idea is to make a flat charge for administration during the first few months and thereafter apply the actual operating percentage against the earned income of the Medical Plan.

In Arizona I believe the initial cost to inaugurate a Medical Plan would be between three and five thousand dollars with the Plan becoming self supporting after the first year's operation. I feel confident that administration costs will run parallel to and not exeeed those of Blue Cross. We are required by the American Hospital Association Service Plans Commission to operat eat not more than 30% of earned income the first year and reduce this figure monthly until at the end of three years we are operating at 15% or less.

The Third question—3. In securing subscribers to the hospital service do you have any calls for medical service plans to go along with your service? This would aid us in determining how near Arizona might be ready for medical service.

We not only have continuous requests for a Medical Service Plan, but have actually failed to enroll groups in Blue Cross because of the lack of it. For example: A well established clothing store in Phoenix, with 50 employees, although very favorable to Blue Cross, has chosen a commercial plan in order to obtain surgical benefits. Another with 80 employees, although wanting Blue Cross, has failed to enroll because of lack of a Medical Plan. A Tucson concern has group life insurance with a commercial plan and would like to have Blue Cross Hospitalization *if* we can arrange for a commercial plan to write surgical coverage and weekly indemnity. Commercial companies will write life and weekly indemnity seperate but as a rule will not offer surgical coverage except in conjunction with their complete full coverage plan. Colorado, St Louis, and Western New York, before the inauguration of Medical Plans had countless request for this service. Several other large concerns, who have commercial plans have informed us they would consider Blue Cross if it had a companion Medical Plan and another politely told us to call back when we could offer a Medical plan as well as the Blue Cros Plan. In our short period of operation, we have met with a consistent demand for a Medical Service Plan and it is my opinion that this demand will increase rather than decrease. You will appreciate the fact that I am not in a position to give you the names of the firms to which I refer—a sort of "military secret" situation, you know.

The last question is—4. Should a Medical Service Plan be inaugurated in Arizona and should this Association wish the Blue Cross Service in Arrizona to assist in administering the plan, how long a period of time would your service need, to be prepared to assist in securing enrollment for a medical service plan? How much of a personnel would our Assoeiation need, in your estimation, for conducting its part of such a joint service?

We shall need a year's time to perfect our administrative procedures and I should say that by the beginning of May, 1946, we will be fully able to cooperate in administering a Medical Plan.

In regards to the amount of personnel the Medical Association would have to employ, it would depend largely on the type of service agreement set up. As I previously stated, the Colorado Assoeiation h asonly one employee, the Missouri Medical has no paid employees and the Western New York Medical Plan had a seperate Medical Director and small office staff which they later merged with the Blue Cross SStaff.

In conclusion I would like to state that we fully appreciate that the medical association has a job on its hand in working out a medical plan. With the experience of a number of good

plans to guide you, I believe your association can set up an excellent plan in Arizona without too much initial cost. Your Association has given the Blue Cross Hospital Service Plan your official approval and support. When the time comes to set your wheels into motoin, as Director of the Blue Cross Service, I shall be happy to lay any request you may have before our board for its consideration and support.

I shall leave a copy of this digest with you for your committee and for your files and also certain administrative materials from various sources which may be of some help in your future studies and procedures.

Thank you very much for the opportunity of rendering your association this small service in return, may I say, for courtesies you have extended to us. I shall be happy, Dr. Mahoney, to answer any floor questions, at this time within the range of my administrative experience and observation. If there are no questions I shall leave you to your discussions and again thank you for your courtesies.

Address to Council and House by Invitation.

Report Of Annual Meeting Of Council And House

The Annual Meeting of the House and Council was held at Tucson on Saturday, April 28. Due to directive of the Office of Defense Transportation, Washington, D. C., the scientific meeting was denied.

In attendance from the Council were: Drs. Dan L. Mahoney, Charles P. Austin, O. E. Utzinger, Hal W. Rice, E. Payne Palmer, F. W. Butler, J. N. Stratton, Jesse D. Hamer, Geo. O. Bassett, C. E. Yount, Frank J .Milloy, John W. Pennington, (seated by consent of Council and House to represent Dr. D. F. Harbridge on Council who, as Chairman of Medical Defense, was unable to attend. Dr. Pennington as a member of the Committee therefore served in his place). Absent from the Council were: Drs. Robert S. Flinn and Walter Brazie, the latter being detained by the critical illness of Dr. Toler R. White, his associate. Dr. White has since passed away.

Ten of the fourteen county societies were represented in the House, the Counties of Apache, Mohave, Navajo—all remote northern groups—and Santa Cruz were unable to send delegates. Attending were: **Cochise:** A. N. Shoun and Hal W. Rice; **Coconino:** Charles W. Sechrist and G. F. Manning; **Gila:** Russel R. Noice and Nelson D. Brayton; **Graham:** F. W. Butler and J. N. Stratton; **Greenlee:** Charles P. Austin; **Maricopa:** James R. Moore, James M. Ovens, Geo. R. Barfoot, Ben Pat Frissell, Paul H. Case, R. Lee Foster; **Pima:** Meade Clyne, V. A. Smelker, Chas. S. Kibler, George L. Dixon, Ed J. Gotthelf and Edw. W. Hayden; **Pinal:** C. R. Swackhamer, O. E. Utzinger; **Yavapai:** Geo. O. Bassett, C. E. Yount; **Yuma:** A. I. Podolsky and Wm. A. Phillips.

BUSINESS (Summary) The following were the main items of business with the action of the Council and House indicated:

I. PROPOSED MEDICAL SERVICE PLAN FOR ARIZONA. *The Committee on Medical Economics* reported on its studies based on letters sent the membership as to whether now might be the time for inaugurating a medical service plan in Arizona. Their report is given in full elsewhere in this issue.

Action of Council and House:

1. Voted: That a further study be conducted with the membership as to medical aspects of such a plan, the administrative aspects being the only ones studied to date.

Mr. L. Donald Lau, Executive Director of the Blue Cross Hospital Service Plan for Arizona, was present at the invitation of President Mahoney and the Committee, and presented administrative possibilities of the plan under study. Mr. Lau's paper is published in full in this issue.

2. Voted: That some committee member or officer, be sent at Association expense to Colorado during the summer to study the operation of the Blue Cross and Medical Service Plans in operation there, if all necessary information may not be obtained by mail.

II. THE COMMITTEES ON PUBLIC POLICY AND LEGISLATION AND PUBLIC HEALTH EDUCATION, jointly recommend that $5,000 be appropriated for a public relations program to cover radio, press and simular agencies or mediums—the purpose of such a public relations program is: to bring the latest information available to the public on the scientific and economic aspects of medicine.

Action of Council and House:

$5,000 was appropriated from the general fund for defraying the cost of a Public Relations program for the year 1945-1946, the program

to include, press radio and printed material, state wide in scope.

III. UNITED PUBLIC HEALTH LEAGUE: Arizona Medical Association gave membership support to the United Public Health League for the year past, this league consists of six of the western states which have set up an office at Washington, D. C. to keep in touch with medical situations before Congress and keep Congress informed on the needs and wishes of the West.

Action of Council and House:
Will await further developements before continuing membership as both the League and the AMA now have Washington offices. If the League continues the Washington office, Arizona will then act as to its membership.

IV. RECOMMENDATION OF THE TREASURER: That dues remain at present level for the ensuing year and that no part of same be appropriated to the Medical Defense fund, was adopted by the Council and House.

V. Other reports of officers and committees, not embracing expenditures of funds, will be found in the Organization Section of this issue of the Journal.

VI. ELECTION OF OFFICERS:

Officers elected for 1945-1946 are

PRESIDENT
Dr. Chas. P. Austin.....Morenci
(by election 1944)
PRESIDENT ELECT
Dr. Geo. O. Bassett.....Prescott
VICE-PRESIDENT
Dr. John W. Pennington.....Phoenix
SECRETARY
Dr. Frank J. Milloy.....Phoenix
TREASURER
Dr. C. E. Yount.....Prescott
SPEAKER OF HOUSE
Dr. F. W. Butler.....Safford
COUNCIL SOUTHERN DISTRICT
Dr. Hal W. Rice.....Bisbee

Holdovers and not subject to election:

DELEGATE TO AMA
Dr. Jesse D. Hamer.....Phoenix
COUNCILORS AT LARGE
(three immediate past presidents automatically taking this office upon expiration of term as president)
Dr. Dan L. Mahoney.....Tucson
Dr. O. E. Utinger.....Ray
Dr. E. Payne Palmer.....Phoenix
CHAIRMAN MEDICAL DEFENSE
Dr. D. F. Harbridge, ...Phoenix
COUNCILOR CENTRAL DISTRICT
Dr. Robert S. Flinn Phoenix
COUNCILOR NORTHERN DISTRICT
Dr. Geo. O. Bassett Prescott

HISTORY AND OBITUARIES

Dr. Hal W. Rice, Historian, presented a tender tribute to members of the Association deceased since the last Annual Meeting. An 'In Memoriam' card is sent out through the office of Historian to the families of the deceased members and to the county medical societies. The following is the text of this year's card:

IN MEMORIAM

Lt.-Comdr. Lyle A. Condell	*O. B. Moon*
John W. Flinn	*W. S. Sharp*
F. J. Gallagher	*J. E. Shearer*
Harlan P. Mills	*A. A. Shelley*

They are not long, the weeping and the laughter,
Love and desire and hate;
I think they have no portion in us after
We pass the gate.
They are not long, the days of wine and roses;
Out of a misty dream
Our path emerges for awhile, then closes
Within a dream.

—Ernest Dowson

Arizona Medical Association, Annual Session,
one thousand nine hundred and forty-five

Signed
Frank J. Milloy, Secretary

PROMINENT STATE LEGISLATOR PASSES

Mr. A. Berky, member of the Seventeenth Legislature from Pima County, passed away at Tucson on May 17 after a brief illness. His legislative services began in 1942 and in this brief period of service to his state he served it well in that his support was to be found on the side of the people in matters of beneficial interest to them. Mr. Berky was of the school of legislators who would voluntarily consult with any organization or community group to be affected by pending legislation. He would be guided in his deliberations and final action by the advice received from these conferences.

The Arizona Medical Association joins the many who regret the passing of this able legislator.

Staff Meetings

ST. MONICA'S HOSPITAL, PHOENIX

February 19, 1945

1. Brief Comments of Therapy in Endocrinology—Dr. Raymond Jannett.
2. Parathyroid Disease with Skeletal Changes—Dr. H. J. McKeown.

March 19, 1945

1. Medical Care of the Poor at St. Monica's Hospital—Dr. Louis Baldwin.
2. Presentation of an Interesting Gynecological Case with Operative Findings—Dr. Clark, McVay.

ST. JOSEPH'S HOSPITAL, PHOENIX

March 12, 1945

1. Dermatologic Slides—Dr. Geo. K. Rogers.
2. Congenital Jejunal Obstruction — Dr. Robt. T. Phillips.
 Surgical Aspects—Dr. James M. Ovens.

April 9, 1945

1. Caudal Anesthesia with Evaluation of Recent Reports—Dr. Geo. R. Barfoot.
2. Serology and the Diagnosis of Syphilis—Dr. T. T. Frost.
3. External Fixation and Presentation of Case of Fracture of Femur—Dr. Matthew Cohen.

ST. MARY'S HOSPITAL, TUCSON

February 20, 1945

1. Hematogenous Osteomyelits: 2 case reports—Dr. G. L. Dixon.
2. Brain Tumor—Dr. C. M. Witzberger.

March 20, 1945

1. Hematogenous Tuberculosis—Dr. W. H. Oatway.
2. Atypical Anemia—Dr. V. G. Presson.

April 17, 1945

1. Symposium on Lupus Erythematosus Disseminatus—Dr. V. Tappan, Dr. B. Zemsky, Dr. B. Bloom.

GOOD SAMARITAN HOSPITAL, PHOENIX

February 26, 1945

1. Meningovascular Syphilis—Dr. S. K. Conner.
2. Preoperative and Postoperative Irradiation in Malignancy—Dr. W. W. Watkins.

March 26, 1945

1. A Mediastinal Tumor (with Case Presentation)—Dr. Howell Randolph.
2. A Case Report of Tuberculosis Complicating Pregnancy—Dr. L. C. McVay.

April 23, 1945

1. Case of Splenomegalia—Dr. J. D. Hamer.

PIMA COUNTY MEDICAL SOCIETY TUCSON

March 2, 1945

1. Silicosis and Related Diseases—Dr. Leroy U. Gardner, Saranac Lake, N. Y.

April 10, 1945

1. Cancer Problems—Symposium.
2. Phases of Socialized Medicine.

MARICOPA COUNTY MEDICAL SOCIETY, PHOENIX

March 5, 1945

1. Inhalation Diseases of the Lung—Dr. Leroy U. Gardner, Director of the Saranac Laboratory, Saranac Lake, N. Y.

SPECIAL MEETING

March 9, 1945

1. The Treatment of Silicosis with Aluminum Dust (Film Demonstration)—Dr. J. W. G. Hannn, Medical Director for McIntyre Research Limited, Toronto, Canada.

April 2, 1945

1. Medical Aspects of Peripheral Vascular Disease—Dr. Robert S. Flinn.
2. Surgical Aspects of Peripheral Vascular Disease—Dr. James M. Ovens.

In the early part of 1944, the Geigy Co. provided great quantities of Neocid, a DDT composition, to combat the threat of typhus in Naples. It also has provided large amounts of Neocid to help in the fight of the military against the malaria mosquito.

It was the Geigy Co., Inc of New York which had called the attention of the government to the amazing insecticidal properties of DDT compositions.

Because we believe you will want all information on the subject in your files, or for use in articles, there are presented herewith excerpts of a radio talk made January 28th, 1945 by Lt. Col. A. L. Ahnfeldt, Director of the Sanitation and Hygiene Division, Preventive Me-

dicine Service, Office of the Surgeon General of the United States Army.

Col. Ahnfeldt said in part:

"Service men know that DDT is one of their biggest protections from those dread diseases, typhus and malaria. In the last war typhus fever caused three million deaths among civilians in Euorpe.

"When our men were going into Naples, a typhus epidemic was starting in the city. We set up forty-two deloucing stations and also went down into the caves beneath the city where people took shelter against bombing, to dust them with DDT powder . . . We treated several million people in Naules in a few months and smashed the epidemic. As a result, not one soldier died of typhus. . . .

"In 1942 the Surgeon General's Office first saw the potentialities of DDT. . . Two medical officers were taking some DDT powder to an isolated detachment of our troops. They were captured by some Bedouins and taken before their chief. It was a pretty tight spot. In desperation they told the chief that they were carrying a magic powder. The chief wanted to see it so the medical officers dusted his robes with DDT. The Americans said that in a few minutes the chief relaxed and smiled and the next day set them free. . . . For the first time in that chief's life he had enjoyed a good night's sleep. . . .

"Thanks to the help of DDT, malaria is under control wherever our men are fighting. . . We supply it in the form of an oil spray which can be applied to places where mosquitos breed. In addition, where soldiers are living in tents or barracks, DDT is applied to the walls. The minute a misquito comes in contact with DDT he gets what the men describe as Double Delirium Tremens. . . The insect becomes nervous and agitated and flies around in a drunken circle before it becomes paralyzed and dies. . .

"In peace time, DDT may well change the destiny of the earth's population. Right now it is helping us to save the lives of our fighting men and win the war. There is no DDT available for civilian use and will not be for some time. But our postwar world will no longer be scourged by typhus and malaria and other insect-borne diseases. DDT is not a cure-all, but in the perpetual war between humans and disease, DDT is one of the most effective weapons yet discovered by man."

Woman's Auxiliary

STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

OFFICERS 1945-46

PRESIDENT	Mrs. Paul Case, Phoenix
PRESIDENT-ELECT	Mrs. Hervey Faris, Tucson
FIRST VICE-PRESIDENT	Mrs. Royal Rudolph, Tucson
SECOND VICE-PRESIDENT	Mrs. Joy A. Omer, Tucson
RECORDING SECRETARY	Mrs. James R. Moore, Phoenix
CORRESPONDING SECRETARY	Mrs. Louis G. Jekel, Phoenix
TREASURER	Mrs. Henry E. Running, Phoenix
DIRECTORS:	Mrs. James H. Allen, Prescott
	Mrs. Edward M. Hayden, Tucson
	Mrs. Harlan P. Mills, Phoenix
CANCER PROJECT	Mrs. Raymond F. Oyler, Tucson
LEGISLATION	Mrs. C. E. Patterson, Tucson
PUBLIC RELATIONS	Mrs. George L. Dixon, Tucson
PUBLICITY	Mrs. T. A. Hartgraves, Phoenix
BULLETIN	Mrs. L. Clark McVay, Phoenix
HYGEIA	Mrs Ludwig Lindberg, Tucson
HISTORIAN	Mrs. George B. Irvine, Tempe
WAR SERVICE	Mrs. Dudley Fournier, Phoenix

(Mrs. T. A. Hartgraves, State Publicity Chairman)

ANNUAL MEETING WOMAN'S AUXILIARY TO THE ARIZONA STATE MEDICAL ASSOCIATION

President's Greeting

We who were so fortunate as to be present at the luncheon and board meetings in Tucson on Saturday, April the 20th, enjoyed the privilege of renewing our friendships with members of the various auxiliaries. We look forward to a very busy year, as we have much to do in order to carry on our many objectives—chief of which is the promotion of health education. We shall bear in mind that our organization is an auxiliary to the American Medical Association and hope and trust that we may be of value to this association both nationally and locally. There is much in the way of war work to be accomplished if we are to do our part and aid in bringing this conflict to a successful conclusion. We look forward to the day when our members whose husbands are in the armed services return. In the meantime, we hope that we may do as much as possible for the wives of doctors in the armed forces who are here among us. Thus we see that there are all these things and many more to be done. We hope that we may soon have a new Auxiliary of Gila County to work with us. May we do our best.

Sincerely,

MARTHA CASE

State President of Auxiliary to Arizona Medical Association.

BOARD MEETING

A board meeting of the Woman's Auxiliary to the Arizona State Medical Association was held in Tucson, April 28th. It was held for the

One of the 21 rigid tests and inspections constantly

Safeguarding Baxter Solutions



This is 10% Dextrose in Isotonic Solution of Sodium Chloride-Baxter, indicated when caloric requirements are greater than the need for fluid.

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The Denver Fire Clay Co. . *Denver-Salt Lake City-El Paso*
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Missoula Drug Company *Missoula*
Ohio Chemical & Manufacturing Co. *San Francisco*
Shaw Supply Co., Inc. *Tacoma-Seattle*
Shaw Surgical Co. *Portland*
Southwestern Surgical Supply Co. *Phoenix*
Spokane Surgical Supply Company *Spokane*

purpose of reading the annual reports and electing officers for the coming year. No meeting of the Auxiliaries as a whole could be held due to war restrictions. Those attending the meeting were entertained with a luncheon by the Pima County Medical Auxiliary.

In the absence of Mrs. James H. Allen, president, Mrs. Claude Davis of Tucson presided Reports of the Committee chairman and reports of Yavapai, Pima and Maricopa county presidents were read. Mrs. J. D. Hamer spoke to the meeting and also gave a report of the total hours given by the women of the State Auxiliary to the various war efforts. We were both pleased and surprised by this total. The new officers were installed and the gavel turned to Mrs. Paul Henry Case, the new prseident. Following this meeting a Board Meeting of the new officers who were present was held.

YAVAPAI COUNTY REPORT.....
.....Mrs. H. A. Hough

Membership of 18 last year. Caneer project one of main objectives. A cheek for $93.85 sent to Mrs. E. Payne Palmer and $16.00 for Cancer exhibit. 60 pounds of woolens were shipped to Phoenix.

PIMA COUNTY REPORT...Mrs. J. A. Omer
Red Cross work—bandages and sewing .
Prevention Work—13 pairs of pajamas and pajama trousers made. Clothes and Xmas cards collected. $50.00 given for building fund.
34 subseriptions to Hygeia.
13 subseriptions to Bulletin.
Cancer Project: Membership Drive, Edueational program, campaign for funds, and making of cancer dressings.

MARICOPA COUNTY....Mrs. Louis G. Jekel
Served regularly one afternoon weekly at the Service Center.
Contributed $75.00 to equip the nursery at Luke Field.
Contributed $15.00 to Camp and Hospital Fund
Served a dinner at the U. S. O.
Contributed $10.00 to Arizona Society for Crippled Children.
Contributed $100 and many hours work to the Cancer Project exhibit.

PRESIDENT'S REPORT..Mrs. Jas. H. Allen
No national eonvention this year.
Hoped to have organized a new auxiliary in Gila. Perhaps next year.

Menopause Symptoms • Senile Vaginitis • Pruritus Vulvae

Effective Relief with

Schieffelin BENZESTROL
(2, 4-di (p-hydroxyphenyl)-3-ethyl hexane)

• Clinical reports agree that Schieffelin Benzestrol satisfactorily alleviates not only menopausal vasomotor reactions but also other associated climacteric symptoms, such as headaches, joint pains, nervousness and fatigability.

Dose: Oral 2 to 3 mg. daily.
Intramuscular ½ to 1 cc. every 4 to 7 days.

• Schieffelin Benzestrol is used in relieving symptoms of senile vaginitis and associated pruritus vulvae by converting the atrophic epithelium to the adult functional type. For localized therapy in this condition Schieffelin Benzestrol is available as an ellipsoid tablet for vaginal insertion.

Dose: 1 or 2 vaginal tablets inserted daily.

Literature and samples on request.

Schieffelin & Co.
Pharmaceutical and Research Laboratories
20 COOPER SQUARE • NEW YORK 3, N.Y.

PATHOLOGICAL LABORATORY

507 Professional Building Phoenix, Arizona

X-RAY and RADIUM THERAPY
DIAGNOSTIC X-RAY
CLINICAL PATHOLOGY

W. WARNER WATKINS, M. D., DIRECTOR
R. LEE FOSTER, M. D., RADIOLOGIST
THOMAS T. FROST, M. D. PATHOLOGIST
DOUGLAS D. GAIN, M. D.

HOURS 9:00 to 5:00
SATURDAY AFTERNOONS AND SUNDAYS EXCEPTED



"The Infinite Capacity for Taking Pains" Builds Your Reputation—and Ours

Do your patients say of you, "He is so careful about the smallest detail—he finds the exact correction for your comfort, selects most becoming style to flatter your appearance—*his glasses are always so satisfactory to wear!*" There is the point where too often the practitioner's reputation is lost for want of the right prescription service. It's why we take infinite pains with our work, use finest precision equipment, supply Bausch & Lomb lenses, frames and mountings.

RIGGS OPTICAL COMPANY
distributors of BAUSCH & LOMB products



Fresh Fuel

UNTIL her physician has opportunity to observe and treat her symptoms, many a woman—even today—faces the failing fires of the menopause in confusion.

Baffled by irregularity and fits of depression, harried by pain and vasomotor disturbances, she often fears the interruption of a productive life. But when she seeks your advice, you can take satisfaction in the knowledge that you have the answer to her problem—**estrogenic therapy.**

For dependable estrogenic therapy, turn with confidence to Solution of Estrogenic Substances, Smith-Dorsey—a medicinal of guaranteed purity and potency. Smith-Dorsey Laboratories are fully equipped, staffed, qualified to produce a strictly standardized product.

With this product, you may rekindle many of those fitful fires . . .

SOLUTION OF

Estrogenic Substances

SMITH-DORSEY

Supplied in 1 cc. ampuls and 10 cc. ampul vials representing potencies of 5,000, 10,000 and 20,000 units per cc.

THE SMITH-DORSEY CO. - LINCOLN, NEBRASKA

Manufacturers of Pharmaceuticals to the Medical Profession Since 1908

Committee on Auxiliary Advisory of the Arizona Medical Association has been very kind. A filing cabinet given us by them and other aid extended us.

BULLETIN REPORT—34 subscriptions.
HYGEIA REPORT—47 subscriptions.
STATE MEMBERSHIPS—132.

Book Reviews

"THE CHEMISTRY AND PHARMACY OF VEGETABLE DRUGS." Author: Noel L. Allport, F. I. C. Research Chemist, The British Drug Houses, Ltd. Published by The Chemical Publishing Co., Inc., 234 King Street, Brooklyn, N. Y. Prce $4.75.

Noel L. Allport, the author of this book, has made a definite contribution to pharmacy and medicine. He has recalled to the attention of those who are interested, the fact that vegetable drugs have not been replaced by the newer synthetics and hormons. That vegetable drugs, their actve principals and the galenicals prepared from them are a very important part of th earmamentarium of the pharmacist and the physician.

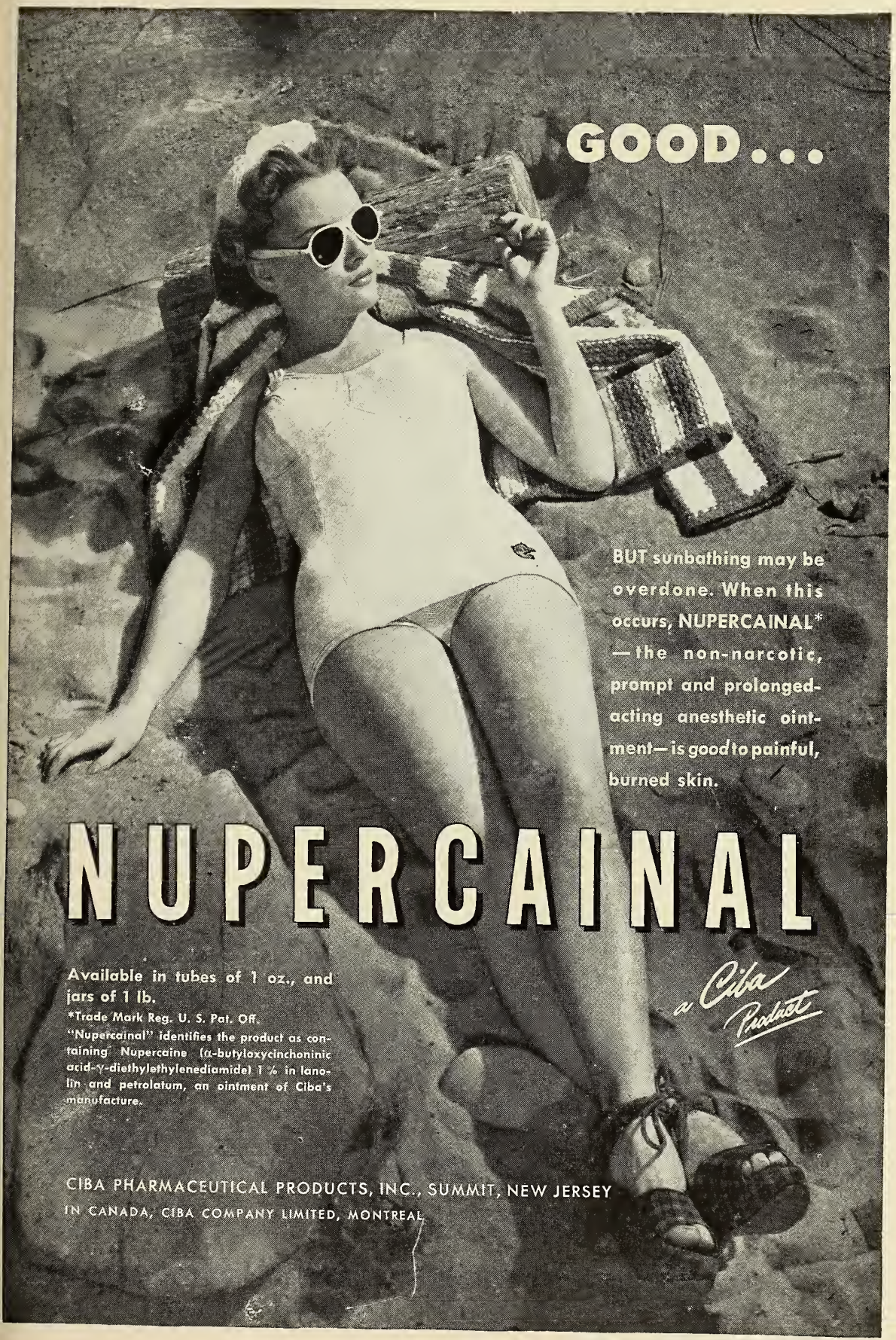
The classification of vegetable drugs is difficult at best. The author had a ehoiee of three divisions: botanieal, ehemical and therapeutie. He chose the chemical as being the most satsfactory from a practical viewpoint, and so far as possible this method has beeu used throughout the book.

Vegetable drugs containing physiologieally active principles which are referable to the chemical group known as alkaloids are by far the most important. These substanees are nitrogenous bases which occur in the plants eombined with acids and salts. They are called alkaloids in allusion to their alkaline eharaeter. More than two hundred vegetable alkaloids have be enisolted but only a few are employed medicinally. The author has compiled a table of the more important alkaloids used in medieine, listing the name of the plant, part emplo,yed, name of principal alkaloid, percentage of alkaloid and physiological aetion.

The next group taken up in this book is the glucosides. These compounds are disinguished by their property of decomposition in the presence of dilute minerl acids, or of certain enzymes with the formation of a sugar and a residual substance of varying complexity.

The purgative drugs, Cascara, Rhubarb, Senna and Aloes contain principles which are elosely allied in ehemical constitution and are known as emodins. These substnces are chemical dervatives of anthraquinine, which is derived from eoal tar.

The resins, podophyllin and jalap occur as


GOOD...
BUT sunbathing may be overdone. When this occurs, NUPERCAINAL* —the non-narcotic, prompt and prolonged-acting anesthetic ointment—is good to painful, burned skin.
NUPERCAINAL
a Ciba Product
Available in tubes of 1 oz., and jars of 1 lb.
*Trade Mark Reg. U. S. Pat. Off.
"Nupercainal" identifies the product as containing Nupercaine (α-butyloxycinchoninic acid-γ-diethylethylenediamide) 1 % in lanolin and petrolatum, an ointment of Ciba's manufacture.
CIBA PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY
IN CANADA, CIBA COMPANY LIMITED, MONTREAL

Accident Hospital Sickness
INSURANCE
FOR PHYSICIANS—SURGEONS—DENTISTS
EXCLUSIVELY
All Premiums Come from Physicians, Surgeons, Dentists. All Claims Go to Physicians, Surgeons, Dentists.

	For
$5,000.00 accidental death $25.00 weekly indemnity, accident and sickness	**$32.00** per year
$10,000.00 accidental death $50.00 weekly indemnity, accident and sickness	**$64.00** per year
$15,000.00 accidental death $75.00 weekly indemnity, accident and sickness	**$96.00** per year

ALSO HOSPITAL EXPENSE FOR MEMBERS, WIVES AND CHILDREN

43 Years under the same management
$ 2,700,000.00 INVESTED ASSETS
$12,700,000.00 PAID FOR CLAIMS
$200,000.00 deposited with State of Nebraska for protection of our members.
86c *out of each* $1.00 *gross income used for members' benefit*
Disability need not be incurred in line of duty—benefits from the beginning day of disability.

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PRESCRIPTIONS COMPOUNDED WITHOUT SUBSTITUTION BY THESE
RELIABLE DRUGGISTS
A CONVENIENT LIST FOR THE PHYSICIAN

WAYLAND'S
PRESCRIPTION PHARMACY
"PRESCRIPTION SPECIALISTS"
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PARKE-DAVIS BIOLOGICAL DEPOT
MAIL AND LONG DISTANCE PHONE ORDERS RECEIVE IMMEDIATE ATTENTION
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PHOENIX' QUALITY DRUG STORE
RELIABLE PRESCRIPTIONS
FREE DELIVERY
Van Buren at 4th St. Phoenix
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solid amorpphous and generally vitrious masses. They are insoluable in water and acids, solnable in alcorol and ether.

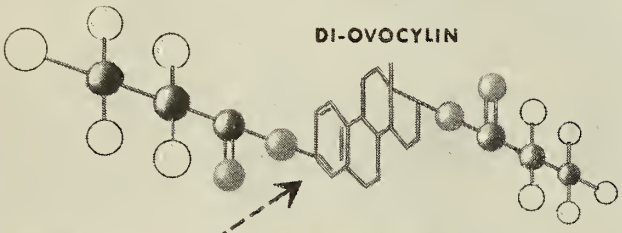
The last general grouping in the book, refers to the astringent vegetable drugs known as tannins.

The author devotes a chapter to the preparation of galenicals. Vegetable drugs consist rarely of the whole plant, but of parts of the plant, such as roots, leaves, bark, etct. Various methods are used to prepare the crude material for use. Some drugs are powdered in mills, others are extracted by using snitable solvents, the finished prduct being in the form of fluid extracts, tinctnres, wines, decoctions, etc. Standard methods of assay of active principles have been established, snch as biological and chemical determinations. These standards are official in the pharmacopeias of all civilized countries.

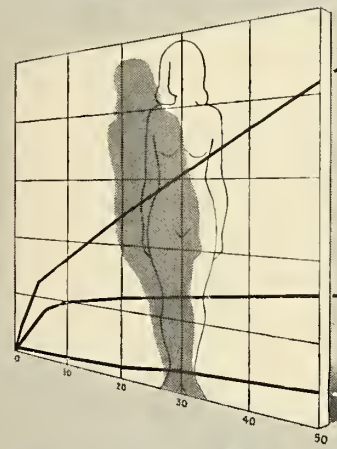
The method of presentation of the individual drugs by the author, follows a definite plan. He first discusses the plant, then the active principles, physieal characteristics, the best productive areas and the variations in quality of the crude drug. The chemistry is then outlined, the number of alkaloids or glueosides found in the plant in the order of their importance. Next in order are the therapeutic uses of the drug and the principal preparations containing the drug or its active principals. Tables are interpolated throughont the book deseribing the physical form of the preparation, per cent of active ingredient, solvent or diluent, aceessor yconstituents and uses.

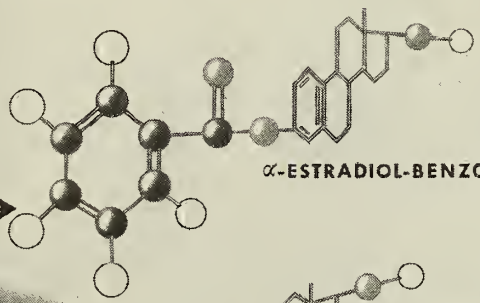
The drugs of interest to the pharmacist, physician and student are opium and its alkaloids, the solanaceons group consisting of belladonna, hyoscyamus and stramonium and their alkaloids, Cinchona with its salts of quinine, ergot its alkaloidal and non-alkaloidal constituents, Nux vomica nd its principal alkaloid strychnine, Coca,, the devine plant of the incas, and its active factr eocaine. Ipecac in itself diaphoretic and emetic, yields an alkaloid emetine which is very effective in combating Entamoebo Histolitica, an organism that feeds on red blood cells and liberates a ferment which destroys the intestinal mucosa. Alkaloidal drugs of lesser importance are pilocarpus, physostigma, hydrastis aconite and lobelia.

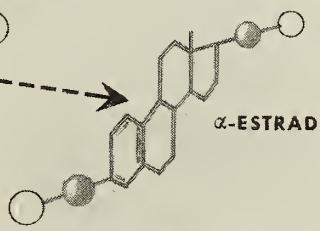
The glucosidal drugs in the order of their importance are digitalis strophanthus and squill. These drugs stimulate the beating of the heart and at the same time slow the pulse rate. No synthetics capable of replacing these drugs have yet been diseovered. Digitalis, the most important glucosidal drug contains several aetive glucosides, the most important of whieh are digitoxin and gitoxin. Digitalis is biologically assayed by the frog heart and eat method. It is used therapeutically in the form of the tineture or powdered leaf.



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ESTROGENIC EFFECTS







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Esterification greatly prolongs the action of the natural ovarian hormone providing a more gradual physiological effect. DI-OVOCYLIN* (α-estradiol dipropionate) is the most ideal ester providing both potency and duration of effect.

With fewer injections, DI-OVOCYLIN promptly controls symptoms associated with estrogenic deficiency. It is both economical for the patient and time-saving for the physician.

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Effective Convenient Economical

THE effectiveness of Mercurochrome has been demonstrated by more than twenty years of extensive clinical use. For professional convenience Mercurochrome is supplied in four forms—Aqueous Solution in Applicator Bottles for the treatment of minor wounds, Surgical Solution for preoperative skin disinfection, Tablets and Powder from which solutions of any desired concentration may readily be prepared.

Mercurochrome

(H. W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium)

is economical because stock solutions may be dispensed quickly and at low cost. Stock solutions keep indefinitely.

Mercurochrome is antiseptic and relatively non-irritating and non-toxic in wounds.

Complete literature will be furnished on request.



HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND

Strophanthus acts similarly to digitalis but is more powerful, and is sometimes preferred to digitalis even though it is more toxic.

Squill, in addition to its action on the heart, is used as an expectorant.

The saponin glucosides such as quillaja, senega and sarsaparilla, so called because they form a soap-like froth when shaken with water, are considered of minor importance in pharmacy by the author.

The best known and most popular of the emodin purgatives is cascara sagrada. Other members of this group are rhubarb, senna and aloes.

The resinous drugs are of academic interest only as they have been replaced by more effective medicaments. One member of this group is of great sociological importance. The flowers of indian hemp (Cannabis sativae) secrete a resin having narcotic qualities and affects the central nervous system. It has been estimated that over one hundred million people habitually indulge in its questionable virtues. The sale of indian hemp is prohibited by law.

The author includes in a separate group diuretics, emmenogogues and aphrodisiacs as their action is on the genito urinary system. Only a few of these items are of importance since in general, the disorders affecting this part of the body are better treated by synthetic chemicals and hormones of animal origin.

A chapter is devoted to the carminative drugs, a term applied to a group of aromatic drugs which induce a gentle irritation to the alimentary tract and thus afford a sense of well being and comfort to the patient. They tend to stimulate the apetite and produce eructation of gas. The carminatives are of interest to pharmacy as they consist of a group of drugs containing volatile oils. These oils are used for aromatizing and flavoring many pharmaceutical products. Some of the more important carminatives are anise, cinnamon, fennel clove and eahdamon.

The drugs containing bitters are used to increase the appetite, not by direct action on the gastric mucosa, bnt to a phychical reflex affect caused by the taste of the bitter substance. Members f this group include gentian, taraxicum and quassia.

The author devotes several pages to urdgs used as rubefacients, these produce skin irritation. Well known members are eapsicum and mustard. Other drngs used in the treatment of skin disorders are chrysarobin and balsam of Peru. In the same he includes the parasiticides, derris, pyrethrium and sabadella.

The cyanogenetic drugs owe their virtue to a glucosidal substance which liberates hydrocyanic acid. Drugs of this group are cherry laurel leaves, wild cherry bark and bitter almond.

Expectorant drngs assist in the treatment of

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*Laryngoscope, Feb. 1935, Vol. XLV, No. 2—149-154.

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inflammatory conditions of the respiratory tract, they increase and dilute the secretion of the bronchial mucous membrane and also act as protective agents to the irritated membrane. Three balsams are of importance: benzoin, tolu and storax.

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In closing, the author makes several observations of a general character. Students of pharmacy medicine and chemistry are inclined to regard the vegetable drugs as being old fashioned, soon, if not already superceded by hormones, vitamins and synthetic chemicals, actually, not withstanding the great discoveries made in the realn of hormone therapy, coupled with the achievements of modern chemical and biological researeh, the principal vegetable drugs are not likely to be readily replamed.

It should not be assumed that the vegetable kingdom has been completely explored, on the contrary, the remarkable bacteriostatic substance of penecillin is an example of a newly discovered substance of therapentic valne, derived from the vegetable kingdom.

The investigation of hormones appears to be a more fruitful field of research than the study of vegetable drugs ,as it is less empirical. The fact remains that so far as vegetable drugs are concerned, no one really knows why digitalis strengthens the contractions of the heart, why quinine is lethal to the parasite of malaria, or why opium is a powrefnl sedative. Eventually these questions will be answered, but a medicine is none the less valuable because the reason for its action is not understood, so there is no valid reason for supposing that the use of vegetable drugs will ever be superceded.

Note: The author has used the British Pharmacopoeit as a guide. Many drugs offieial in the British Pharmaeopoeit are not so reeognized in the U. S. P., and the reverse is also true.

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1. Am. J. Dis. Child. **54**: 1227, 1937. 2. The Vitamins, Chicago, American Medical Assn., 1938, p. 524.



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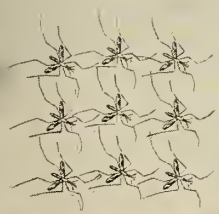
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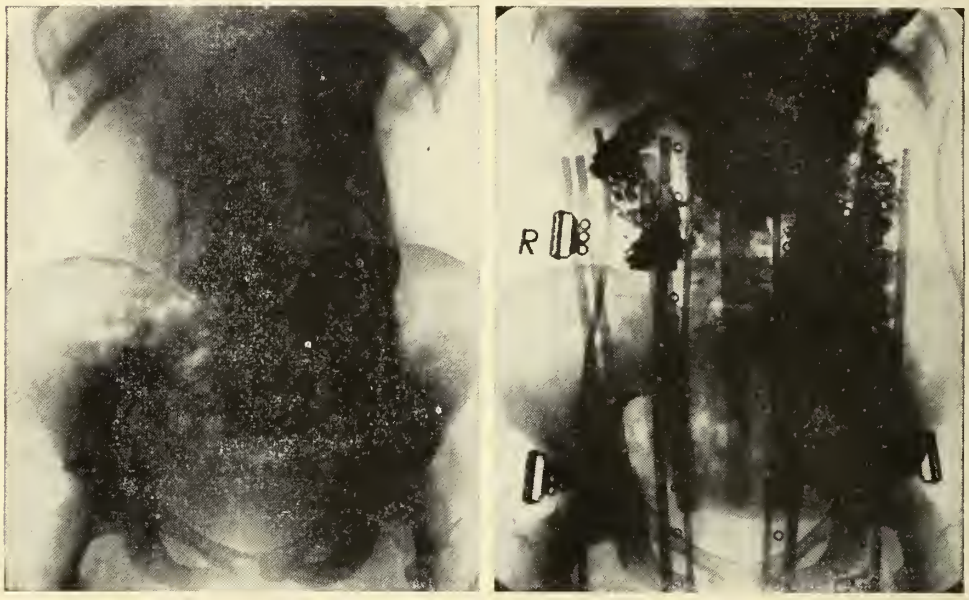
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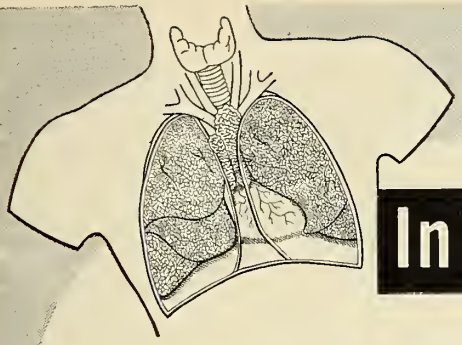
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*Stainsby, W. J.; Foss, H. L., and Drumheller, J. F.: Clinical Experiences with Penicillin, Pennsylvania M. J. 48:119 (Nov.) 1944.

McBryde, A.: Hemolytic Staphylococcus Pneumonia in Early Infancy; Response to Penicillin Therapy, Am. J. Dis. Child. 68:271 (Oct.) 1944.

Stainsby, W. J., Chairman, Commission for the Study of Pneumonia Control of the Medical Society of the State of Pennsylvania: Up-to-Date Facts on Pneumonia, Pennsylvania M. J. 48:266 (Dec.) 1944.

Larsen, N. P.: Observations with Penicillin, Hawaii M. J. 3:272 (July-Aug.) 1944.

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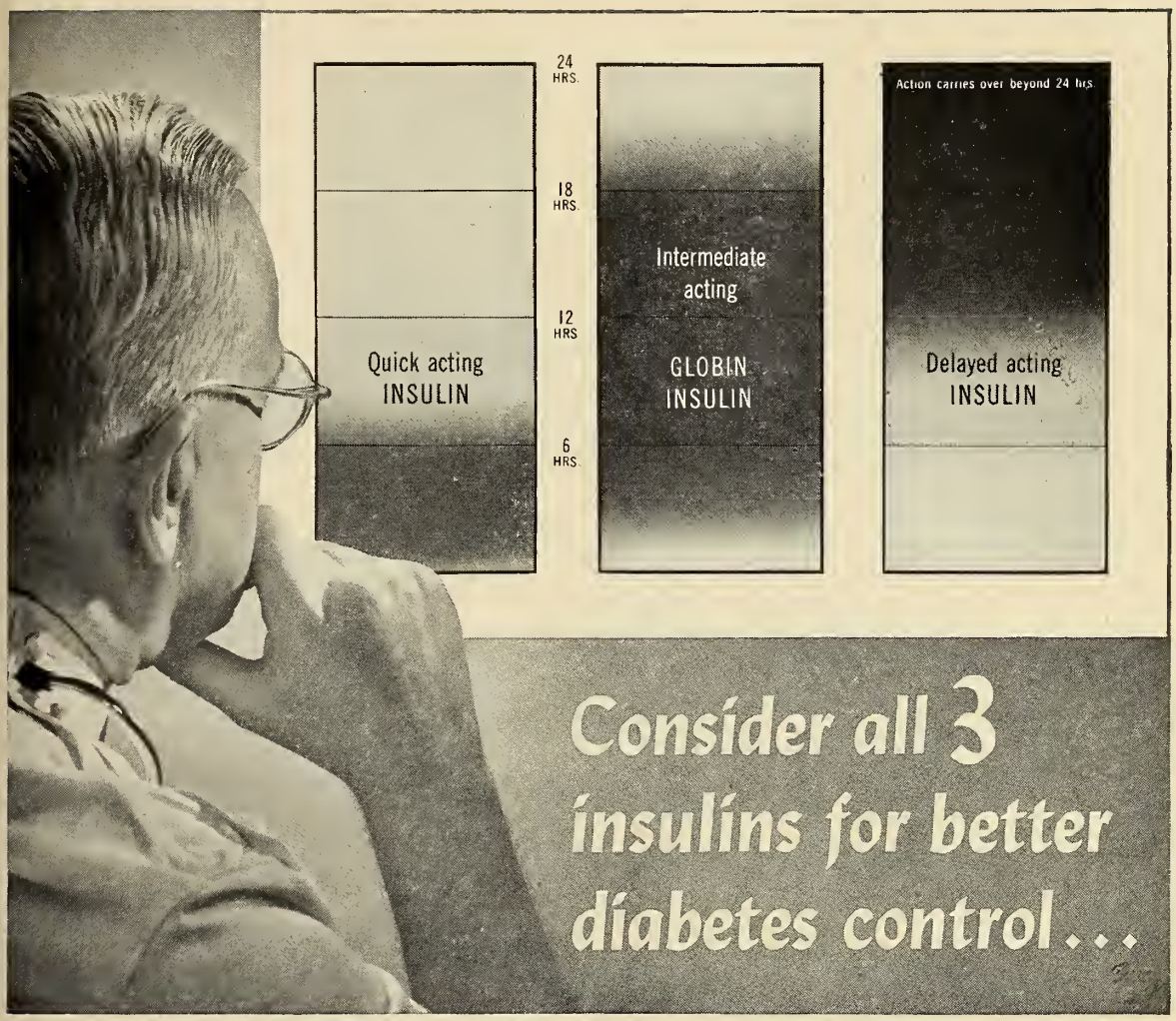
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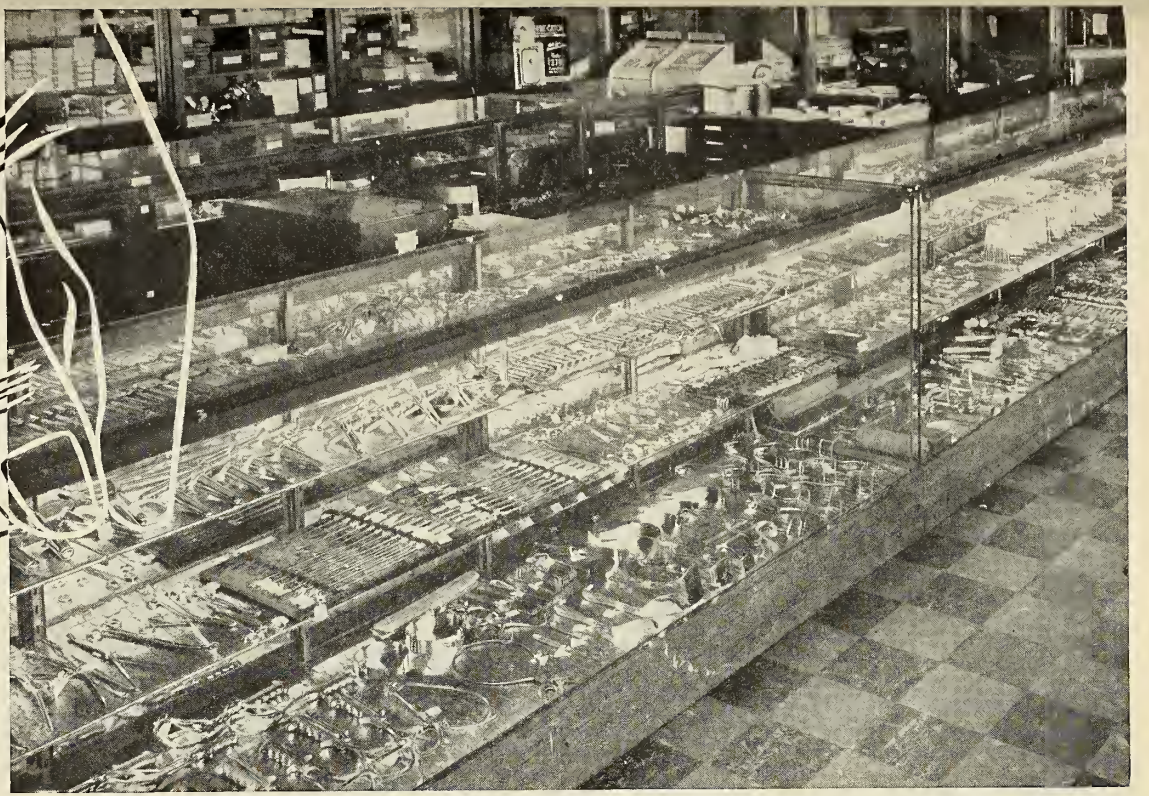


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MESOTHELIOMA OF THE DIAPHRAGM

MAURICE ROSENTHAL, M. D.*
and
BEN PAT FRISSELL, M. D.
Phoenix, Arizona

PRIMARY tumors of the diaphragm are very rare and only a few malignant tumors have been recorded in the literature. In 1941 Hyman and Lederer reported a case of fibrosarcoma of the diaphragm, and their review of the literature revealed only seventeen primary tumors of the diaphragm. In 1942, Ackermann reported a case of primary fibrosarcoma of the diaphragm, which was substantiated by histologic study of the tumor removed at operation. He stressed the roentgen diagnostic criteria in the diagnosis of primary tumors of the diaphragm. In the same year Arkless reported a rhabdomyofibroma of the diaphragm. In 1943, Soto reported a primary lipoma of the diaphragm and discussed his method of treatment. In 1939, Gale and Edwards reported a primary malignant tumor of the diaphragm which cannot be accepted as an authentic case since the origin of the tumor was not unequivocable as they admitted in their discussion. Ackermann also included a second case of primary tumor of the diaphragm in his 1942 report which also cannot be accepted, as it was based only on roentgenographic study. Therefore, to date twenty-one cases of primary tumors of the diaphragm have been reported, of which ten were malignant primary tumors. Five of these were diagnosed as myogenic sarcoma, two as fibrosarcoma, one round cell sarcoma, one fibromyoma sarcoma, and one was classified as a sarcoma, the author not stating the specific cell characteristics. Therefore, any additional information on this rare pathologic change should be recorded.

REPORT OF CASE

CLINICAL HISTORY: The patient was a white female, 80 years of age. Her chief complaint was paralysis of the left upper and lower extremities, following cerebral hemorrhage which occured 6 weeks ago. During the past ten years, the patient stated that she had had two or three cerebral strokes. The patient was admitted to the hospital with an acute upper respiratory infection.

PHYSICAL EXAMINATION: The chief findings were dullness over both lung based with diminished breath sounds. There were numerous scattered moist rales throughout both lungs. There was a friction rub in the region of the right lower lobe in the axilla. The heart sounds were low in intensity, and the rate was 100 per minute. The abdomen was large and flabby. No masses could be palpated. There was no edema of the ankles. The laboratory data was as follows: urine showed 25-30 white blood cells per h. p. f.; 10-15 hyaline cast per h. p. f.; and 2-5 granular cast per h. p. f. There was one-plus albumen. The R. B. C. was 3,760,000 the W. B. C. was 14,950; the differential was essentially normal; and the H. B. was 71% (S). The N. P. N. was 36 mgms. per 100cc of blood. The blood serology was negative. The temperature fluctuated between 99° and 103° until several days before her death, when it began to rise and reached its peak of 106° at the time of death. The patient expired 12 days after admission.

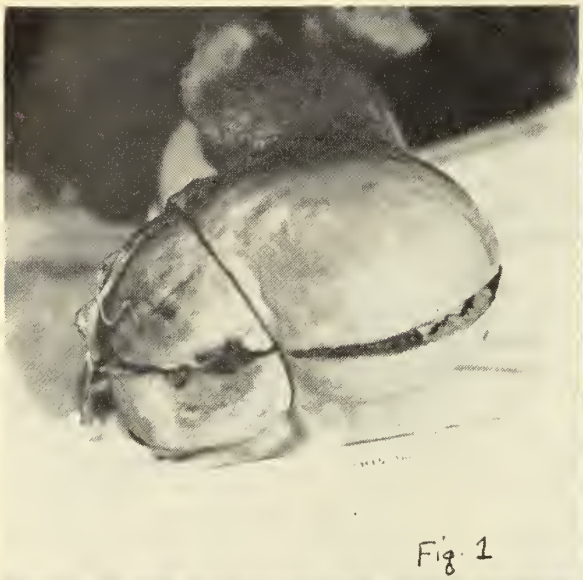
NECROPSY: The body is that of a fairly well developed female, approximately 80 years of age. No external findings of pathological significance are noted.

The lungs are emphysematous and both lower lobes present bilateral bronoho-pneumonia. The heart shows moderate hypertrophy and dilation of both ventricles. The heart valves are normal. The coronary ostei are patent as are the coronary vessels. The aorta reveals atheromatous plaques with atheromatous ulcers in the abdominal portion. This process in most severe at the bifurcation of the ileacs, The ileac arteries also show a marked degree of arteriosclerosis.

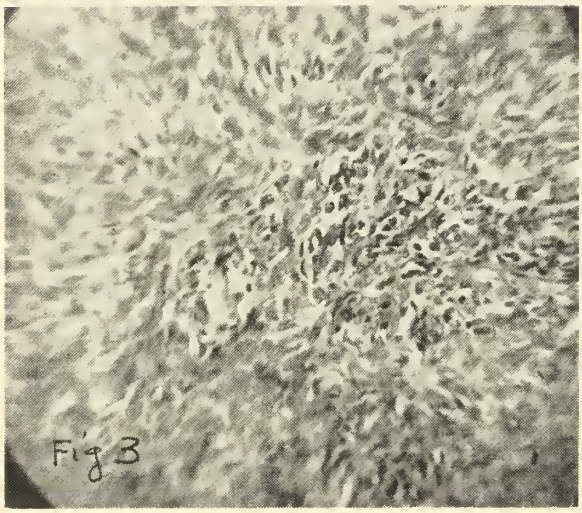
The right dome of the diaphragm is slightly elevated. Along its under surface a large grayish-white encapsulated tumor mass is found. Grossly this tumor mass is encapsulated by a continuation of the fibromuscular serous membrane of the diaphragm. The tumor mass has produced a concavity on the superior surface of the liver.

The liver shows no other gross change of pathological significance. The gallbladder and bile passages are also normal. The kidneys are decreased in their capsules strip with slight difficulty, presenting numerous irregular shaped scars and a finely granular intervening par-

* From the Department of Pathology, Good Samaritan Hospital.







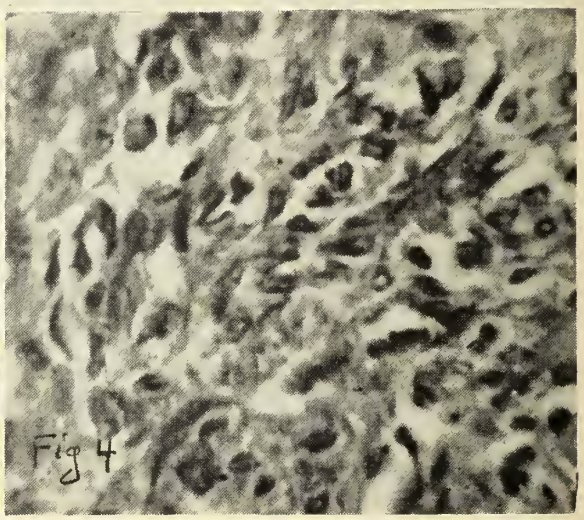


Fig. No. 1—External surface of tumor showing smooth gray capsule which is continuous with the diaphragm.

Fig. No. 2—Cross section of tumor showing numerous irregularly-shaped channels.

Fig. No. 3—Photomicrograph showing spindle form fibroblastic type of cell on the periphery and cells of epithelial morphology in the center.

Fig. No. 4—High power photomicrograph showing tumor cells which are of epithelial morphology and are forming intercommunicating channels. Note signet-ring cells.

enchyma. The spleen is small and atrophic in appearance. The adrenals and pancreas show no gross change of pathological significance. The gastro-intestinal tract reveals only a moderate degree of congestion of mucosa.

Upon examination, the brain shows old organized hemorrhage and hemorrhagic cysts of the right hemisphere, involving the basal nuclei.

Anatomical Diagnosis:

1. Fibrosarcoma of the diaphragm.
2. Hemorrhage, cerebral, right hemisphere, organizing.
3. Arteriosclerosis, generalized.
4. Nephrosclerosis.
5. Bronchopneumonia, bilateral.

Macroscopic Examination—tumor: The specimen consist of a roughly oval-shaped, firm, tumor mass which measures 10 x 15 x 8 cms. The surface presents a light-grey, smooth capsule which is continuous with and arise from the diaphragm. The cut surface shows that the mass is divided transversely into two portions by a thin fibrous tissue septum. The larger portion measures 9 cms in length and the smaller portion measures 6 cms in length. The surface is light yellowish-grey in color and presents a fasiculated appearance which is most prominent in the larger portion. The smaller portion presents numerous irregularly shaped channels, most of which appear to be collapsed. Some of the cystic spaces are filled

with a dark reddish hemorrhagic-like material. The capsule is 2 to 3 mms in thickness and present a compact fibrous tissue appearance of circular fibers.

Microposcopic Examination—tumor: Sections through the periphery of the tumor mass including the capsule show that the tissue consists of numerous elongated, spindle-shaped cells. Separating these cells, a loose, fibrillar material is found. With van Gieson's stains, these areas present numerous areas of collagenous fibers. Some of these are found to be in thick, course bundles, or strands, and in some places they appear to be fused into homogenous masses. With Weigert's stains, small strands of fibrils are found between fibroblastic cells. In other areas, the fibroblasts, the collagenous fibers and the fibrils form a basket-weave arrangement. The tissue neighboring this capsular tissue is highly cellular and the cells present the morphologic characteristics of endotheilial cells, which are arranged in solid sheets and whorl-like formations. In some places the transformation of these cells into epithelial cells showing a secretory activity, are seen. Here, some of the cells present signet-ring characteristics. Sections from the smaller portion of the tumor mass show large channels in which numerous villus-like processes are seen projecting into the lumen. These villi are lined by endothelial-like cells, which in some places are also showing the transition into epithelial cells with signet-ring characteristics. The stroma of the villi is comprised of spindle-shaped, fibroblastic-like cells. Some of the epithelial cells formed gland-like structures with inter-communicating channels. The chief histologic characteristics, therefore, of this tumor shows a varied type of cell morphology. Transitions between cells of spindle shape fibroblastic form, endothelial-like cells forming channels, and lining vallae, and epithelial cells producing globules of secretion, are seen.

COMMENT

The diaphragm is a thin musculo-fiberous septum. The greater portion of the under surface of the diaphragm is covered by the peritoneum. The upper surface is covered by the pleurea. The serous membranes, therefore, although the continuing reflections of the pleurae and peritoneum, are actually an anatomic part of the diaphragm. Therefore a tumor arising from the muscular, tendinous, serous membranes, or any other anatomic structures of the diaphragm, should be considered a primary tumor of the diaphragm. This is especially true when the tumor is part of the diaphgram, presenting a continous capsule intimately associated with the diaphragm, and free from organs.

The part of the mesoderm which lines the peritoneal and the pleureal cavities is histologically an epithelium but differs in some respects from other types of this tissue and is called mesothelium. The mesothelium is the simple squamous cell layer which covers the surface of all serous membranes. The prospective potencies of these cells are of a double nature. They may give rise to epithelial or fibroblastic cells. For example, in tissue cultures, the mesothelium may show a purely epithelial type of growth, arranged in islands or sheets. On the other hand, in inflammatory reactions, the mesothelial cells may give rise to typical fibroblasts that are connective tissue cells. Originally the term endothelium was used to include the mesothelium. However, the name endothelium is usually reserved by histologists for the simple layer of squamous cells which line the inner layer of the walls of the blood and lymph vessels and of the heart.

Since the mesothelial cell is a multipotentil cell, tumors arising from this cell may present the characteristics of mixed tumor. The pleomorphic nature of the growth warrants its classification in a group separate from tumors arising from either fibroblastic or epithelial elements. Furthermore, it is not necessary to assume an origin from two types of cells. Thus, it seems proper to classify the mixed tumors, arising from the serous linings, as mesotheliomas. Furthermore, cells of epithelial morphology or of fibroblastic forms, may predominate, but this does not alter the basic nature of the tumor. Thus if the gross and microscopic characteristics of a tumor suggest an origin from mesothelioma cells it should be properly classified as a mesothelioma, and not as an endothelioma, carcinoma or fibrosarcoma.

SUMMARY

1. A case is reported of a primary malignant tumor arising from the pleural or peritoneal surface of the diaphragm.

2. The mesothelial cell is a multipotential cell which can differentiate into epithelial or fibroblastic types as illustrated by the case reported.

BIBLIOGRAPHY

Hyman, M. A. and Lederer, M.: Archives of Pathology. Vol. 31, No. 2. Feb. 1941.

Ackerman: American Journal of Roentgenology. Vol. 47, No. 5, May, 1942.

Soto, Mario, Vergara: Journal of Intestinal College of Surgery. Vol. 6, No. 2, March, 1943.

Arkless, H. A.: Medical Bulletin, Veteran's Administration. 19: 225-229, Oct. 1942.

Gale, J. W. and Edwards, S. R.: Journal of Thoracic Surgery. 9: 185-193, Dec. 1939.

RATIONAL BASIS FOR ENDOCRINE THERAPY

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THE rational use of the drugs of endocrine origin depends upon the knowledge of their physiological and pharmacological action. A review of such action should therefore help us in evaluating the various products that are offered to us by drug companies. The futility of employing the drugs on a purely empirical basis is evidenced by the fact that we are continually trying a new product, advocating it enthusiastically only to drop it in favor of a newer one. Since comprehensive review of the endocrine glands is clearly beyond the scope of this paper, only those with direct or indirect sexual properties will be considered. Neither will an attempt be made to cover these in all their aspects. Rather, I will confine myself chiefly to the physiolgy of the various hormones, the form in which they are commercially available, and the general limitations of the products.

The hormones of the thyroid gland is considered the most important of those having an influence on sexual physiology. Of all the drugs used in the treatment of functional menorrhagia, thyroid is probably the most reliable. Clinical hypothyroidism will not necessarily be present. A. B. M. R. should usually not be the deciding factor in its use for disorder of the female reproductive system. Thryoid should be given in gradually increasing dosage, sometimes even to the point of tolerance, always remembering that it takes approximately ten days to achieve a maximum effect. Note should be made also that some products especially the Parke Davis products are fifty to one hundred per cent stronger than USP strength and this should be taken into consideration when prescribing thryoid. Indications for use of thryoid in this respect include functional menorrhagia, especially in young girls, amenorrhea, sterility and habitual abortion.

Next to be considered are the hormones of pituitary origin. Since the action of the two hormones of posterior pituitary gland, pitressin and pitocin are well known and the indications for such rather clear, they will be passed over at this time. Of the various hormones or factors of the anterior pituitary, three are of direct interest to us here. The first of these is the lactogenic hormones or prolactin. This drug produces lactation in a breast sensitized by estrogen and progestin. The hormone is inhabited during the course of pregnancy by the estrogens which are produced in larger amounts by the placenta. Upon delivery of the placenta, the estrogenic titer of the blood drops very rapidly and the prolactin then stimulates the breast to milk production. Therein lies the basis for the use of estrogenic substances such as stilbestrol in inhibiting lactation when the baby is not to be breast-fed. The drug must be given soon after delivery and in rather large doses, 5 to 15 mgm daily for 3 to 4 days. The drug prolactin is available commercially by that name. It is occasionally used to stimulate greater milk production but is rather expensive. It has also been tried in the treatment of functional menorrhagia without a great deal of success.

In more common use are the gonadotrophic hormones of the anterior pituitary gland. There are probably two separate gonadotrophic hormones, namely the follicle stimulating hermone and the luteinizing hormone. In the normal female adult the follicle stimulating hormone is responsible for the production of follicles by the ovary. As the follicle developes, estrogene is given off by the follicle which in turn inhibits the further production of follicle stimulating hormones by the pituitary gland. Upon rupture of the follicle and ovulation the luteinizing hormones stimulate the ovary to a production of corpus luteum and the production of its particular hormone, progestin. As the corpus luteum degenerates and the estrogen titer of the blood becomes less, the follicle stimulating hormone is again released and the cycle is repeated. In the event of a pregnancy, estrogen is produced in large quantities by the chorionic tissue of the placenta and the pituitary gland is inhibited from production of follicle stimulating hormone and further ovulation ceases.

In the male the follicle stimulating hormone is responsible for the development of the seminiferous tubes and spermatogenesis. Lutenizing hormone stimulates the interstial cell of the testes to the production of testosterone.

In addition to the gonadotrophic hormones of the anterior pituitary gland, similar substances are produced by the chorionic tissues of the nor-

mal placenta and chorionic tumors. These are referred to as the chorionic gonadotropic hormones, A. P. L. or anterior pituitary like hormones. There are commercially available products of both types and their similarities and differences should be clearly understood.

Of the products of pituitary origin there are few, chiefly because of the large number of glands that must be extracted to obtain the hormone and the difficulty in obtaining a pure product free from other pituitary hormones. The most commonly used product of this type is that sold by Parke-Davis under the name of Synapoidin. Synapoidin is a combination of pit and chorionic gonadotrophine. Gonadophysin (Searle) is an extract of fresh anterior pituitary glands.

Of the chorionic gonadotropins, there are two classes. The first is the hormone obtained from the urine of pregnant women. The hormone is present in large amounts in such urine and is incidentally the basis for the A. Z. and Friedman pregnancy tests. It is not truly an APL hormone inasmuch as it produces absolutely no follicle stimulation, but only a luteinizing action. This should be remembered when using products of this type in the hopes of treating amenorrhea or sterility successfully. Commonly used products of this type are Antuitrin S, of Parke-Davis, Follutein (Squibb), and Korotrin (Winthrop).

The second type of chorionic gonadothropin hormone is that extracted from the serum of pregnant mares. This differs from the human type in two ways. First, it is a very large molecule and is not excreted in the urine. Therefore, when injected, its action is prolonged. Secondly, it resembles the anterior pituitary hormone much more closely in that it is capable in experimental animals of producing ovulation. A commonly used product of this type is Gonadogen (Upjohn).

The usual indications for these hormones are: Amenorrhea, especially that of the primary type: (2) Functional menorrhagia and metrorrhagia; (3) Sterility. The use of these hormones in all of the above depend upon their ability to produce follicle stimulation and ovulation by the ovary and in, this way establish a normal cycle.

Now let us examine the known facts concerning each type. First, the hormone of glandular origin. It has been proven that ovulation can be produced in experimental animals by this product. It is believed by many that they can produce ovulation in humans but no one has ever been able to prove this. It is hoped that when more potent products than any at present available are produced that human ovulation can be stimulated. At the present time, most authorities agree that ovulation is probably not produced in any appreciable number of cases.

As for the hormones from human pregnancy urine, follicular production is obtained in neither humans or animals. The rational basis therefore in most cases for the use of such drugs does not exist.

The hormone from pregnant mares serum is capable of producing ovulation in experiments with animals, especially monkeys, but no production of ovulation in humans has ever been substantiated. Most authorities agree that they probably do not in the majority of cases. However, of all available ones, it is most likely to do so.

The use of these drugs in most cases then is based only on the hope that they may produce ovulation and the results are as a rule no more spectacular than the indications, although it would appear that in occasional cases they are efficacious.

Of greater clinical value are the hormonal products of the ovary. Of these the estrogens will be first considered.

The term estrogen is applied to a group of compounds possessing estrogenic activity. The term therefore does not refer to a particular substance but to compounds having common actions on the female genital system. The estrogens are of two main classes, first the naturally occurring, and secondly the synthetics, chiefly diethlystilbestrol.

In the body, the naturally occurring estrogens are from three main sources.

(1) The granulosal cells of the graafian follicles of the ovary.

(2) Small amounts of estrogen are produced by the corpus luteum.

(3) Large amounts of estrogens are produced by the placenta. During pregnancy, estrogens appear in the urine in large amounts and this is the chief source of natural estrogens, either from urine of pregnant women or pregnant mares.

Natural estrogens exist as three closely related substances. First, and probably the form in which they are produced by the ovary is estradiol. This is the most potent form and is marked chiefly for parenteral use as estradiol dipropionate and benzoate. Example: as Di-ovocylin (Ciba), Progynons (Schering), Dimenformon (Roche). A recently released product which is very potent orally is Ethinyl estradiol of Schering. The other forms of the natural estrogens are estrone and estriol, which are probably break down products of estradiol. Estrone is marketed under that name and also as theelin. Estradiol is approximately 10 times more potent than estrone which is in turn about 10 times more potent than estriol.

The estrogens are responsible for a number of important actions. First, they stimulate the female genital system and are responsible for the production of the secondary sexual characteristics. Secondly, they are responsible for the cyclic proliferation of the endometrium of the menstrual cycle. Following a normal menstrual period the ovary develops a graafian follicle under the influence of the follicle stimulating hormone of the pituitary gland. As the follicle develops, estrogen is given off in increasing amounts. The estrogens stimulate the proliferation of the endometrium. This phase of endometrial regeneration is termed the estrogenic or proliferative phase of the cycle. Upon rupture of the follicle a corpus luteum is developed which produces its particular hormone progestin. The endometrium enters the secretory phase under the influence of this hormone. If a fertilized ovum does not become implanted, the titer of estrogen and progestin falls and menstruation again ensues. Whether the phenomenon depends entirely upon the estrogenic level or upon both of the hormones has not been conclusively proven. Thirdly, and a very important action to remember, they are inhibitory to the function of the anterior pituitary gland.

The indications for the use of the estrogens are much more clear cut than those of the gonadotrophins. They include the treatment of menopausal symptoms, senile vaginitis, functional bleeding, and amenorrhea. For all except the latter there is a rational basis. To use them in the treatment of amenorrhea is hardly rational. To use them thus may produce a temporary episode of bleeding by stimulating the endometrium, but at the same time, the FSH hormone of the anterior pituitary gland is inhibited and hope of production of follicles by the ovary and the establishment of a normal cycle is interfered with and the very purpose for which they are given is defeated. To use them in women who are menstruating normally such as in treatment of dysmenorrhea is similarly irrational since they inhibit FSH production and thus upset the normal cycle. Although they are useful in stopping episodes of functional bleeding they do not correct the fundamental cause.

To the products of the corpus luteum is given the name progestin. This being a general term applied to all substances having luteal action, whether they be produced by the corpus luteum or by the placenta. The term progesterone is reserved for the pure crystalline substance whether it be obtained from the extraction of corpus luteum or by synthesis. The hormone is available in numerous forms, usually in oily suspension under the name progestereone or such trade names as Lipo-Lutin. A form of the drug pregneninolone is also available as oral corpus luteum. Its potency by this route is doubtful. Indications are:

(1) Habitual abortion
(2) Threatened abortion
(3) Dysmenorrhea
(4) Functional bleeding—its acts only as a substitution therapy in functional bleeding and its value is doubtful.

The last of the hormones commonly used are the Androgenic hormones. The name testosterone refers to the pure crystalline product obtained either from testicular extracts or by synthesis. Androsterone refers to a substance with similar action found in urine and probably represents a breakdown product of testosterone. The term androgen includes all of these products. They are used clinically in gynecology chiefly because of one specific action, that of pituitary inhibition. This is believed to be the basis for their efficacy in controlling functional bleeding. In this respect they are very reliable. Their danger lies in the fact that it sometimes takes dangerously near a masculinizing dose to produce a satisfactory result. Occasionally menopausal symptoms will be alleviated by these drugs which have not been helped by estrogen. The dosage should be limited to not more than 300 milligrams in a month.

(1) There is little rational basis for use of

many of these drugs, especially the gonadotropins.

(2) Hormonal empericism with relatively impotent organotherapeutics substances was safe enough. But as more and more potent products are made available, continued empiric use can do great harm.

(3) The estrogenic substances are the most valuable of these drugs when used properly.

(4) The male hormones are of value in treating certain gynecological disorders but their dangers, especially masculinization, should not be overlooked.

HOW THE PRESS AIDS THE HOSPITALS TOWARD BETTER PUBLIC RELATIONS

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IT'S still true that you get out of any program exactly what you put into it. With reference to my subject, "How the Press Aides The Hospitals Toward Better Public Relations" the application is this: The press can aid the hospital in better public relations in exact proportion to the degree in which the hospital relays to the press a picture of its newsworthy and worthwhile accomplishments

To begin with, let's have a word about the term itself.

While public relations are as old as the hills, the phrase used in description came into general use during tthat golden era just before the financial doomsday of 1929.

At that time advertising men began to call their customers "clients." Undertakers became "morticians", plumbers were "sanitary engineers" and press agents became "public relations counsellors."

So in the beginning, it appears, public relations was merely a pretty name for publicity.

Even then, however, there were some businesses and professions that were doing a new kind of management, although most casual observers, deceived by surface showings, concluded that public relations differed from press agentry only in the people it served.

Press agents worked for producers, actors, prize fighters, writers, lecturers, yes, even for politicians.

But if a new leader was to be created, or if a leader already too well known was to be deodorized, the job of putting across the desired effect was popularly referred to as public relations.

Then along came 1929. Business of all sorts, and that included the professions, took a fancy nose dive. The American people were facing unique and chaotic conditions.

When in trouble, human nature looks for a scapegoat and as the panic wore on, the public turned on business like a mad dog. Employers were caught in a cross fire from hostile public opinion on one side and from the witch burners of business on the other.

Frantically business sought to restore public confidence and quickly revised its concept of public relations.

Slowly at first, but with mounting rapidity, business and professional men of all sorts began to reflect that public relations might not be the name for a sissified perfume, but might be the label of the very tonic that was so desperately needed for recovery.

They began to realize that public relations, instead of being a rather hazy method of pleasing people in a hit or miss fashion, should and could be an exact science of creating and maintaining the greatest asset of any individual or profession the goodwill or the public.

It was at that precise moment that public relations became an operating philosophy, to be applied in everything an up-to-the-minute organization does.

It became the art of getting along with the public all time and not just a stunt, or feat of clever manipulation, to meet an emergency or special occasion.

And this concept has changed the thinking of the American public. No organization is too large or powerful to ignore the insistent need for good public relations.

Given before Phoenix meeting of Arizona State Hospital Association, Hotel Adams, Feburary 26, 1944.

In fact, the larger the group or organization, the greater the need for carrying a wholesome, truthful picture to those whom it proposes to serve.

What has all this to do with hospitals? A great deal, I believe.

Every hospital, perhaps, should realize the importance of public relations and then set up a plan to insure that they shall be good instead of bad. You're bound to have them one way or the other. The quality depends on the public relations machinery set up in each institution.

What's being done along this line now?

Well, in Phoenix, the situation is probably the same as in most other parts of the country. News emanating from our local hospitals is mostly routine.

Once or twice a day the police reporter from each newspaper calls the hospitals to check on accident cases, emergencies of one sort or another, of the condition of an exceptionally well known patient.

He wants to know whether Joe Doakes, knifed between the ribs last Tuesday, is still alive.

And then, once a year, each hospital has a graduating class and gets to the paper a list of the graduate nurses.

In the good old days, before metal and newsprint shortages, we also printed pictures of the individuals. I hope it won't be long before we can do that again.

This is the routine news and, of course, it's important. But it seems to me there is a much wider field of hospital news which in many cases has remained practically untouched.

I'm not referring to propaganda stories, of pure publicity designed merely to sell the virtues of an institution. That's advertising and is an entirely different field.

I mean genuine news or news features which would be interesting to our readers and, incidently of value to the hospital.

Suppose, for example, that the Phoenix hospitals, jointly or as individuals, were to assemble as the basis of a news story the excess demand made on them during the past year or two.

The number of patients handled during 1943, for instance, as against the total in the last prewar year. Such a story could enumerate the maximum facilities of the hospital, the situation as it pertains to the number of doctors and nurses available and other factors which make the situation difficult as of today.

Might not such a story bring to the rank and file of Phoenix residents a better understanding of what you people are up against and lessen the criticism which a lack of understanding inevitably brings?

It might even result in many borderline cases deciding to remain at home rather than unnecessarily clutter up a hospital room. That in itself might be a worthwhile objective.

I'm also convinced that many a human interest story might be relayed to the local newspaper by hospital personnel. Stories which would make interesting reading and in which the hospital's name could legitimately be used in a manner to enhance its public relations.

Please don't misunderstand me. I don't propose to say that these things are not frequently done.

On the contrary, they are. In Arizona we have an outstanding example of the awareness of good public relations. I refer to the Sage Memorial hospital at Ganado. That institution, farther removed from civilation than any other, nevertheless is one of the best known.

Why? Because it gets to Arizona newspapers the interesting facts which happen there and which makes news. I recall, for example, the story several years ago of an Indian child, injured on the Navajo reservation, whose life was saved by treatment in an iron lung.

Many of you may remember the story. It made colorful copy for days. Legitimate copy in which our readers were avidly interested.

How could we in Phoenix have learned of those circumstances except through the intelligent and helpful co-operation of the hospital?

And, very importantly, the personnel there does this regularly, consistently. Not all the stories we get from there are as interesting or colorful as the one I mentioned, but they all are newsworthy, or they wouldn't be printed. Year in and year out, you'll find the Sage Memorial hospital in the news.

That sort of public relations, and I submit it's worthwhile, must stem from the top. It doesn't happen by accident. IT MUST BE PLANNED.

On this occasion, I'd like to make a plea to all hospital personnel to take the press fully into your confidence.

Please remember that a newspaper worthy of the name must, insofar as it's humanly pos-

sible, print all the news to which its subscribers are entitled. That's a mighty big order and covers a lot of ground.

There are all sorts of news stories. Some are cheerful, some sad. Some tell of good deeds, others of evil. The newspaper must print all of them that constitute news.

Now it's only natural that organizations, no less than individuals, would rather see in print a story that reflects sunshine instead of shadow. It's always a temptation to withhold facts it is BELIEVED might be harmful or unpleasant.

May I ask this? If the FACTS constitute news which ordinarily is used, don't make the mistake of withholding it.

For believe me, it IS a mistake.

An example: Sometime ago, a patient in a local hospital jumped or fell from a second or third floor. He died.

The newspaper did not get the story the day it happened. We had some difficulty getting the facts the following day. Now here's what happened:

Before we did get the story into print, the news room received three telephone calls assuring us that at the hospital in question there had been three suicides in a week.

The callers insisted their infromation was correct and wanted to know why we were suppressing the story.

That's a sermon in itself.

We want to be as helpful as we can. If the governor is taken to a hospital, we name the institution. We should. It's part of the story.

At the request of the hospitals, we do not mention them by name in ordinary death cases. That's proper, too because it isn't important.

Of course, if the president of the United States were to be hospitalized in Phoenix and were to die here, the circumstances would be entirely different.

In that case we would not only mention the hospital by name, but the story would give the number of the room in which he was a patient, the name of the attending physician and that of the nurse, if we could get it.

The things I have said here are highlights only, but I hope they may be helpful in some manner. You fine folks have been very kind and patient and I won't presume on your hospitality by being long winded.

Seriously, let me repeat that you can get out of a public relations program only what you put into it. Outline a concrete plan, follow it persistently and take the press into your confidence. I hope that here in Phoenix the newspapers will always be worthy of that confidence.

SEROLOGY AND THE DIAGNOSIS OF SYPHILIS

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In the past serologic tests have been limited largely to persons suspected of having syphilis. With the advent of prenatal, premarital, preoccupational and preinduction tests they are being applied to tens of millions in all walks of life. Thus a reexamination of serologic principles and their application to the diagnosis of syphilis becomes an immediate need. The proper diagnosis, treatment and control of syphilis rest upon the proper employment of serologic test and on their interpertation. Many patients have been started on the long and arduous path of anti-syphilitic treatment before the diagnosis of syphilis has been adequately established, and irreparable harm has been done. Many of these needlessly treated people have become and remained syphilophobiacs for the rest of their lives.

Serologic reactions are based on the presence in the blood of a substance of unknown nature termed "reagin" or Wassermann antibody." This substance appears in the blood in response to activity of the spirochete in the tissues and can be detected and titrated by the various serologic procedures, so that on the surface it would seem very simple; a positive test means syphilis, a negative test, no syphilis. Actually however, it is much more complex than this. In the first place the reagin is not a specific substance. It is normally present in the blood of certain lower animals, it occurs as a result of other infections, and it is not always present in syphilis. Kahn[1] has shown that the aggregates that occur in the Kahn test are present in ultramicroscopic size in the bloods of a large proportion of normal people and that in syphilis these aggregates become large enough to

be seen grossly in the test tube. The mere presence of the spirochete in the body is not sufficient always to produce reagin as evidenced by the sero-negative primary stage.

In general it may be said that the presence of reagin follows the general pattern of immunity reactions. In typhoid fever the Widal does not become positive as soon as the patient ingests typhoid bacilli, but only when the disease has established itself and the body has begun to produce immune bodies, some ten days or two weeks after the clinical appearance of the disease. Likewise in syphilis the blood does not become positive until six to eight weeks after the invasion of the spirochete. By this time the spirochetes have been carried by the blood to all the organs of the body, and have been in residence for some time. It is only when the body begins to resist them that the blood begins to become positive. In the second stage, the body is acutely aware of their presence, the damage is conspicuous and widespread, and the serology is uniformly positive in all cases. As the development of immunity increases, the activity of the spirochete becomes limited to localized areas or may become quiescent, and as a result about 20% of cases no longer show a positive reaction. Adequate treatment results in negative serology in a large majority of cases. Occasionally a negative serology cannot be obtained in spite of adequate or super-adequate therapy. This is thought to be due to continued activity of the spirochete at some site in the body, frequently the central nervous system.

The problem which concerns us most at this time is the question of the positive reaction that occurs in the absence of clinical syphilis, or that occurs in routine testing. Does such a result mean syphilis or can it be due to something other than syphilis?

First let us examine the serologic test itself. How specific are the tests for syphilis and how is this determined? The sensitivity and the specificity are determined by testing a thousand bloods from known syphilitics and known non-syphilitics respectively. If in the 1000 syphilities, 800 have positive test the test in question has a sensitivity of 80%. If in the 1000 non-syphilitics 990 have negative test the specificity is 99%. These figures are considered to be entirely staisfactory for an acceptable test. However, if we apply this test to a population of 100,000, containing 1000 syphilities we will get positive results on 80% of the syphilitics or 800 cases, but we will also get false positive reactions on 1% of the entire population or 1000 false positives. The false positives in this instance exceeding the true positives. A drop of 5% in sensitivity would mean 50 missed cases, but an increase of specifity of 0.9% would reduce the false positives to 100, a more reasonable figure. It is easly seen that a specificity of 100% must be the ultimate aim of all serological procedures. This does not seem possible because these test are positive under certain circumstances in a wide variety of conditions.

Kolmer[2] has listed 30 diseases other than syphilis in which serologic reactions may be positive. Rein[3] in a recent study of false positive reactions in the army has made the following interesting observations. Six tests were used, the Kline diagnostic, the Kline exclusion, the Boerner-Jones-Lukens, the Mazzini, the Kahn and the Kolmer Wassermann. 129 soldiers vaccinated for smallpox were tested during the first, second and third weeks after vaccination. 52% having a vaccinia reaction had positive serology, 20% were positive. In leprosy 85% of 80 patients a total of 44.9%. 86% of these reactions occured during the second week.

Of 72 patients with primary atypical pneumonia verified by x-ray evidence, 17 or 23.6% were positive with two or more of the tests, 7 strongly positive and 10 with low titre. 36 of these patients were also tested for psittacosis with a complement fixation test and 19 were positive, three with a high enough titre to be considered diagnostic of psittacosis. Of 79 patients with miscellaneous upper respiratory infections such as influenza, pneumonia etc., 20% were positive. In leprosy 85% of 80 patients were positive with two or more tests, the majority strongly positive. In filariasis 11.3% of 53 patients were positive. In Weil's disease 43%, in malaria 44% and in typhus fever 39.4% of the patients gave positive reactions. These then are all false positive reactions, many of them of diagnostic intensity. What are the factors involved in the false positive reactions? As a result of studying these cases Rein arrived at several conclusions. (1). There are apparently certain individuals called serologic reactors, who will produce reagin as a result of a nonspecific stimulus. This is illustrated by the observation that some of the soldiers with minor vaccinoid reactions gave strongly positive serology while

others with severe vaccinia reactions were negative. The same effect occured in the other diseases. There is no relation therefore between the severity of the disease and the occurence of positive serology, the factor seeming to lie in the particular individual. (2). Certain diseases are more prone to produce positive serology than others. Notorious are leprosy and malaria. (3). The false positives usually occur between the 7th and 21st days of the disease, hence showing a definite incubation period. Blood drawn in the period of incubation are more apt to be positive. (4). The number of test employed affects the number of false positives as certain serums will be positive with one test and negative with another. The best way to get a large number of false positives is to use a large number of tests. (5). The type of tests also affects the results. Primary atypical pneumonia, upper respiratory infections and smallpox vaccination rarely give false positives with the Kolmer Wassermann but frequently do with the flocculation tests whereas leprosy and malaria give more frequent false positives with the Kolmer Wassermann. The Hinton test gives the lowest incidence in malaria. (6). The interval between tests affects the number. Some of these reactions are of short duration and will be missed by infrequent testing. They all tend to become negative with time. Those that are 1 plus in 1-2 weeks. Those that are 4 plus in 2 to 3 months but occasionally one will remain positive for several years thus leading to great potential diagnostic difficulty.

So far it has been presupposed that an acceptable tests is being performed by experienced people on properly collected blood. Under the best conditions and in the laboratories of author serologists serologic tests vary from day to day both in sensitivity and in specificity for reasons that are unknown at the present time. Fortunately this variation is for the most part of small degree, and because of their simplicity is less in the flocculation tests. The tests are also possessed of a somewhat greater sensitivity at no loss of specificity and are less subject to technicial error. There is a strong feeling today among serologists that the materials for the performance of serologic tests be standardized by some central agency so that tests run in different laboratories will be less subject to variation. The maintenance of satisfactory levels is greatly aided by correlating the clinical picture with the serologic results. If the laboratory knows that certain bloods are from untreated cases of florid secondary syphilis it will know that something is going wrong if positive results are not obtained. Knowledge of the clinical stage of the patient is one of the best controls of the serologic reaction. Therefore all serologic requests should be accompanied by some statement as to the clinical state of the patient.

The unfortunate part of the false positive reaction is that it occurs out of a clear sky in a routine test in a patient not clinically suspected of having syphilis. What to do then, when this happens? The thing most commonly done is to repeat it promptly, and frequently to send the blood to as many different laboratories as are available. This is almost sure to result in utter confusion. I recall one case in which the serologic results ran all the way from 4 plus to negative on the same patient within the space of several days. Verification tests have been developed and are in use attempting to establish the true nature of this type of reaction. At present there is no verification test that always gives a syphilitic type reaction with known syphilitic serum or that always gives the false positive type of reaction with known ono-syphilitic serum. They make mistakes in both directions. This places the responsibility of proving or disproving the diagnosis of syphilis where it belongs, on the clinician's shoulders. The patient should have a detailed diagnostic study directed not only to elicit syphilis but to elicit any recent disease that might cause a false positive. This should include careful questioning and a complete examination with particular attention to the cardiovascular and central nervous systems, radiologic studies of the heart and aorta, spinal fluid examination to rule out symptomatic neurosyphilis, examination of contacts and repetition of serologic examination. If the serology is strongly positive, quantitative methods should be used and the patient should be followed serologically and without treatment for three months at least, with serologic test every two to four weeks. A continuing drop in serologic titre without the administration of antisyphilitic treatment is strong evidence of a false positive reaction. Additional laboratory work such as blood counts and smears, Paul Bunnell test, sedimentation rate and specific complement fixation, agglutination and precipitation test to

(Continued on page 257)

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Editorials

Our Public

Elsewhere in this issue appears an Editorial reprinted from the *Tucson Daily Citizen* on the subject socialized medicine. The medical profession is receiving commendable comment from many sections of the lay press thruout the nation. But it also receives its share of criticism and ridicule. The latter comes from the so-called yellow press, and the sensational writers. Or from some editor or publisher who has a personal grudge, or ax to grind, and to satisfy his own whims, would abolish the achievements of laws to protect the public health. It is a sickening experience to walk into a morgue and see a high school student who has died of pneumonia, or diphtheria. But such instances still occur in spite of the medical profession's efforts to raise the standards of those who are entrusted with the care and health of the public.

The medical profession does not have to go to the lay press or outside the profession to hear ridicule ponred upon it. The National Physicians Committee recently completed a nationwide survey of opinions of 115,000 physicians in the United States. 12% of all these doctors, or 13,800 believe that the enactment of such legislation as the Wagner-Murray-Dingell Bill would be a "good thing". An encouraging part of this same survey was that 98,800 or 86% of all doctors were fimiliar with this proposed legislation. It is members of this minority group who always make the headlines. A prominent Eastern physician who apparently is more adept with the English language, than with the modern day armamentarium of medicine, or present medical statistics, suddenly discovered, among other things, that maternity hospitals and nurseries were all wrong. That babies would be better off if they were borne at home. Further, that the majority of children who had tonsilectomies had normal tonsils removed. One wonders just what a normal tonsil is. Then along comes a well known popular weekly magazine which is more interested in a sensational story than in facts and gives him a whole page with headlines.

None of us know exactly what is in store for the private practice of Medicine. No one can tell at this time just how near to, or how far away we are from State Medicine. The old Wagner-Murray-Dingell Bill is lost, but a new Wagner-Murray-Dingell Bill has been introduced in Congress. In commenting on the failure of his original bill, Senator Murray publicly condemned the National Physicians Committee, as the main cause for the bills failure. While the N. P. C. has made no such claim, nevertheless they tell us they have been working along those lines. Incidently some doctors, are unwittingly using Senator Murray's exact words in criticising the N. P. C. and refusing to donate to its activities.

It may be that a sufficient number of the American people still believe in private enterprise. They will be hearing about compulsory health insurance more and more from the politicians and the racketeers and will be finding these measures on their ballots. Economic conditions will always remain a strong determining factor. But our best advice and warning has been to keep up an aggressive campaign of educating and informing the public. To do this the State Society will spend $5,000 this next year in radio, newspaper, and similar activities.

Even our severest critics can no longer maintain that the practice of medicine is not changing. It has already ceased to be a competitive affair. The subject of Medicine has become so enormous that no single mind can begin to comprehend it. As a result doctors are becoming more and more compelled to limit their work, in order to become adept in some particular phase or specialty. A recent book on physical diagnosis listed 29 different branches or specialties.

This evolution in medicine means that doctors are becoming more and more interdependent on

one another in their work. If this situation is to succeed along with our program of Public Relations, a solid front will have to be presented. Petty jealousies and intolerances must be forgotten. And the rough spots will need to be polished, instead of broadcasting them to the world.

There is nothing we can do about this minority group in the Medical Profession. They can be properly classed as a fifth column. But there are 101,200 doctors who understand and believe in "private medical practice" and their personal support and cooperation are essential if this system is to be preserved.

The Backdoor

Whether or not we have a compulsory national insurance sickness bill passed by congress, the present plan of the U. S. Veteran's Administration makes provision for sufficient increase in government hospital beds to bring between twenty and forty percent of the population under a free medical service plan under the Veterans' Bureau.

Since 1939 the number of federal hospitals has increased 600 percent; the number of State hospitals has increased 10 percent; while the number of other hospital beds, (private), has increased 5 percent. In 1939 there were six times as many private hospital beds as there were federal beds; in 1944 there were practically the same number of each. The present program of the Veterans' Administration calls for sufficient development to send the number of Federal hospital beds far ahead of private.

The mushroom growth of the Veterans' Administration Hospital program is due to the fact that the immediate peak load of the casualties is used as justification for expanding the facility over the next 30 years, and the end result will be that these hospitals built to meet the needs of veterans at this time will be used for veterans whose non-service connected medical care will be given to them as a bonus for their army service.

In most cases the Veteran cannot be fully compensated for what he has given. With that in mind it can be understood that we wish to be sure that what we give the Veterans is worth giving, and wanted. Obviously, war disabilities should be given every consideration, but to take this enormous stride along the road to the Federal Government in Medicine in the name of anything else but the government in the business is leading and deceptive. If we want something let's buy it for what it is. If we want to give the Veteran a bonus, let's give him a bonus, but not something that he will not want when he gets it, and furthermore, something that will not be good for him when he takes it.

The record for rehabilitation in Veterans' Hospitals has been shown to be poor in most instances. Wherever possible the hometown environment is found far more successful when it comes to rehabilitation.

Let the Federal Government subsidize private institutions such as hospitals wherever the need is shown. Let the Veteran go to his family physican, who will be his friend as well as his doctor. Avoid the mistake of building enormous institutions where a man is a number and frequently a zero at that . —H. R.

Vocational Rehabilitation

PALMER DYSART, M. D.
Medical Consultant for
The Vocational Rehabilitation Division State Department of Vocational Education

The Vocational Rehabilitation Act of 1920, as amended by Congress in 1943, provides a Federal-State Co-operative program, the object of which is to assist the individual who is unemployable because of a static disability to assume a useful and productive place in society. This program not only provides education and assistance in locating employment, but where indicated medical and surgical rehabilitation when needed and possible to render the client physically fit to participate. This assistance is provided by co-operating organizations set up by the Federal and State governments which provide finances and administration, and enlist the aid of Medicine, Social Service, existing education facilities, and last but not least, the employer himself who in many cases also needs re-education to the fact that the individual having a disability is not necessarily unemployable.

Physical restoration of the client is in the hands of the Medical Profession, and unlike pre-existing programs, funds are now available which pay for all services at a rate that has been set up by the Profession itself through the work of the Professional Advisory Committee which was selected by the State Board for Vocational Education from a list submitted by the Arizona Medical Association. The original

examination of the client is done by his own physician, and where special therapeutic measures are required, the client or his doctor select a specialist in that particular field who meets qualifications of the specialty board. This care is coordinated by the Medical Consultant for the Vocational Rehabilitation Division whose responsibility it is only to see that adequate care is provided that will suit the physical, educational, and employment requirements of that individual.

To be eligible for participation in the Arizona Vocational Rehabilitation program, a client must be sixteen years of age or over, a resident of the State of Arizona for at least one year, and have a static disability which constitutes an employment handicap. To receive the benefits of the training and job placement part of the program, his financial status is not considered, but to be cared for under the Physical Restoration Section, etc., he must be in need of financial assistance and care will be provided until his employment permits him to assume the financial obligations of such care.

It is not the intent of this program to take over the medical care of cases requiring protracted treatment, for the ultimate aim is EMPLOYMENT. It is not a substitute for other medical aid programs, and thus, certain limits have been defined. The condition must be STATIC. This does not mean chronic, although, due to the latitude and individualization of cases, certain chronic conditions may be included. Tuberculosis is an example of this. Acute or active cases cannot be handled for a maximum of ninety days' hospitalization and thirty days in a convalescent home may be provided with an additional thirty days' convalescent care furnished upon the recommendation of the Medical Consultant, and, it would be a poor policy to subject an active case of tuberculosis or other chronic infectious diseases to the rigor of an educational program with employment in view. When such a case, either of pulmonary or bone and joint disease is judged to be arrested, then it becomes eligible, although further medical care may be advisable such as pneumo-thorax in the one case, or corrective surgery or prosthetic appliances in the other.

Disabling conditions which render an applicant eligible for participation under this program fall in numerous categories. Medically, they could include such conditions as allergy, cardio-vascular disease, arrested or chronic respiratory conditions, slowly progressive malignancy with a prognosis of several years of useful life, blood dyscrasias, and diabetes. Eye conditions and defects of the other special organs receive attention. Crippling conditions needing corrective surgery, prosthetic appliances and special training, and even such a condition as cholelithiasis which can be corrected by surgery are included. Restoration is not limited to physical defects, for care will also be provided to mental cases who under adequate psychiatric treatment and proper training and regime offer a favorable prognosis for employment in some type of work. The epileptic and the schizophrenic can assume a useful position in society if placed in proper employment under certain conditions such as agricultural work.

We doctors of Arizona now have the opportunity of helping in a program whose aim is to reinstate the physically disabled individual as a useful member of society and be paid for it. To those who fear the encroachment of State Medicine, it can be assured that this is a medical program on an individual basis with the free choice of doctors depending only upon the requirements of the case and the qualifications of the doctor. The medical side of this program is organized by our Medical Society which controls the medical policies, and the State and Federal governments enter into it only by providing funds and organization.

We can help with this program by keeping our eyes open for prospective cases, with the thought always in our minds, "can this case become a useful member of society if he should receive training or physical restoration under the Vocational Rehabilitation Program?" Cases can be referred directly to the Vocational Rehabilitation Division of the State Department of Vocational Education at 13 South 17th Avenue, Phoenix, or 135 South 4th Avenue, Tucson, or telephone or write, and a representative will be sent to interview the patient.

Dr. Hill-Burton Bill

Senate Bill 191 which is known as the Hill-Burton Bill is one piece of legislation before our National Congress which is considered constructive. It has been endorsed by the Board of Trustees of the American Medical Association and by the American Hospital Association.

There are two parts to the bill. The first part would set up a sum of $5,000,000 to assist the several States to make an inventory of their existing hospitals and to survey the need for construction of hospitals, and to develop a program for the construction of such public and other non-profit hospitals as well, in conjunction with existing facilities, afford the necessary adequate hospital, clinic and similar service to all people.

The second part of the bill would appropriate $100,000,000 for the fiscal year ending June 30, 1946 to be used for the construction of public and other non-profit hospitals. A non-profit hospital means any hospital owned and operated by a corporation or association, no part of the net earnings of which inures to the benefit of any private shareholder or individual. This amount would be made as out-right grants. The bill places emphasis on importance of local interpretations of needs and local autonomy of administration.

Wagner Bill Semantics

On May 24th, Senator Wagner introduced in the United States Senate a new bill amending the Social Security Act. The bill, S-1050, is a book length document of 185 pages covering every phase of social insurance. It is presumed that none can take exception to any part of the proposals without being subject to the accusation of heartless opposition to providing the underprivileged with the benefits to which they are justly entitled.

American editors are the nation's experts in the use of words. They are ever alert to safeguard the interest of the public. In a study of this document, these editors will be especially interested in the remarkable admixture of cold steel intentions expressed with softening phrases and sheer preachment and propaganda disguised as integral part of the proposed amendments.

The bill levies direct tax of 8% on all wages and salaries of all workers in private employment up to $3,600 of annual earnings and a direct tax of 5% on the earnings of all self-employed people up to $3,600 per year. It is estimated that this tax would produce each year a fund in excess of Eight Billion Dollars. In all likelihood this is the largest amount resulting from any single tax levy ever made anywhere at anytime. Yet, in all of the 185 pages of text, the term "tax" does not appear save with reference to refunds prior to 1946 and to make records conform to sections of the Internal Revenue Code—pages 168 and 172. The term Social Security Contribution—page 164, is substituted for the unpopular term "tax."

Approximately $3,142,000,000 of the total tax fund would be earmarked to provide Personal Health Services. A National Advisory Medical Policy Council is established—page 77. The Council is appointed by the Surgeon General of the Public Health Service. Its function is strictly advisory. It has authority to establish other Advisory Committees and Commissions. But, the Surgeon General is "authorized and directed to take all necessary and practical steps to arrange for Personal Health Service Benefits for all Social Security beneficiaries and their dependents"—page 72. These include general medical, special medical, general dental, special dental, home nursing, laboratory and hospitalization benefits—page 100. The Surgeon General is established by law as the agent to dispense and pay for medical, dental, nursing and hospitalization service for an estimated 110,000,000 people.

The bill states that the methods of administration shall insure the prompt and efficient care of individuals, promote personal relationship between physician and patient, provide incentives for professional advancement and encourage high standards in the quality of service —page 82. These are worthy objectives. They will be quoted endlessly by proponents of this legislation and by those who strive to establish centralized controls in the United States. They are nullified by direct proposals of the Amendments. The sacred nature of the physican-patient relationship is destroyed by the introduction of an administration and the public recording of symptoms and case histories. Professional standards are automatically and dangerously lowered when political favor takes the place of personal competence. The real incentive of the doctor is forfeited when he is made subordinate and subservient to the bureaucrat.

In the United States more than fifty million people have provided for themselves measures of health protection through insurance with private carriers. When presenting his omnibus bill to the Senate, Mr. Wagner stated:

"There has been much misunderstanding about the part that existing voluntary insurance or prepayment plans and similar agencies may play in the Social Insurance System. Let me

emphasize that our bill makes a place for them to continue their good work".

But these are the facts. Participants in voluntary insurance plans of programs are exempted from the payment of the tax on that part of their earnings that is expanded for the insurance premium—page 151. The tax to be paid by a worker earning $3,600 per year would be $144.00 annually. If a worker earning $3,600 expands $100 for any voluntary of group insurance program he would pay the tax on $3,500 of income or $140. Under such circumstances private insurance programs could not survive.

In introducing his Bill, Senator Wagner said: *"But health insurance is NOT socalized medicine; it is not state medicine." and "I believe n the American system of Free Enterprise".*

It is a fact, however, that under the proposals the Surgeon General of the Public Health Service, working under the Administrator of the Social Security Board, becomes the dispenser of all health care and the final arbiter of the mental and physical well being of the nation. If such a core of collectivist control is ever established in this country applying to the most sacred and vital wants of every human being it would require a miracle for free enterprise in any sort of forms to survive the impact.

These things the people should know. It is predicted that American editors will tell them. *Political Semantics has been defined as the technique of pasting soothing syrup labels on bottles of nitro glycerin.* N. P. C.

Office of Surgeon General

Acting Secretary of War Patterson and General Kirk Report on Health of Army

In presenting Major General Norman T. Kirk, Surgeon General of the Army, at the Secretary of War's press and radio conference on 24 May 1945, the Honorable Robert P. Patterson, Acting Secretary of War, said in part:

The war in which we are engaged has produced many seemingly unsurmountable problems, without precedent in the development of new weapons, new methods of training, and new tactics. But none of these problems has been more difficult than the problems faced by our Medical Department in caring for the largest American Army in history, fighting in virtually all parts of the world. And yet, despite these problems, no Army at any time in history has achieved a record of recovery from and freedom from disease comparable to that of the American Army in this war.

The Medical Department, its doctors, its nurses, its corpsmen, has saved the lives of 97 out of every 100 men wounded in battle who reach a hospital, compared with 92 in the World War. Seventy out of every 100 wounded overseas were returned to duty, and 27 were evacuated to this country.

During the past three years, the Medical Department has maintained a record of less than one death from disease per 1,000 men per year. During the World War, 19 out of every 1,000 men died each year from disease. During the Spanish-American War we lost 26 out of every 1,000 per year, and in the Civil War, 65 out of every 1,000 men died each year from disease.

In all during this war, 12,000 men died from disease from December 7, 1941, to May 1, 1945. In World War I, 62,670 men died from disease; in the Spanish-American War, 3,500 died from disease, and in the Cival War, 336,216 men of the Union and Confederate armies died from disease.

Malaria has been reduced from hundreds of cases per 1,000 men per year to less than 50. The dysenteries, which once put entire regiments and armies out of action, have occurred among less than 90 out of every 1,000 men per year and have been raidly controlled. During World War I, 38 per cent of the men who contracted meningitis died, compared with 4 per cent in the present war, and 24 per cent of those who caught pneumonia died in 1918 compared with only seven-tenths of one per cent in this war.

No greater tribute can be paid to the Medical Department of our Army than the tribute paid by its record of saving lives in this war.

It is a record written by Medical Corpsmen following the troops into battle; by doctors performing their surgery amid the bursting of bombs; by the self-sacrifice of American women in the Nurses Corps, laboring long hours under the most difficult of conditions, by thousands of other Medical Department personnel, and by scientific research and development.

The Medical Department today is well prepared for the intensification of its work brought about by the cessation of hostilities in Europe. Thousands of wounded veterans in the European and Mediterranean theater are being transported to the United States as fast as ship and planes are available. Physical ex-

aminations are being given to each of the 3,500,000 soldiers in those theaters before they are redeployed. And Medical Department personnel will be sent to the Pacific in ever-increasing number as our forces are marshalled for the final blow against Japan.

The peak of the Medical Department's activities will not be reached until the fall of 1945. At present, wounded and sick are being returned to this country from all theaters at the rate of 44,000 a month. This evacuation will continue until all of the patients in the Euorpean and Mediterranean theaters are removed, which will require 90 days.

In anticipation of this movement of patients from Europe to this country, the Army has provided seven additional hospital ships, three of which are now in service, with four more to be commissioned shortly. This will bring the total unmber of hospital ships to 29, with an aggreated patient capacity of 20,000. Of the 25 Army hospital ships now in operation, 18 are in the Atlantic, five are in the Pacific, and two more are en route to the Pacific.

In addition to these hospital ships, special hospital equipment has been placed aboard 24 troop transports, giving the Army an additional patient-carrying capacity of 40,000.

Eight thousand patients a month are being brought back, to the United States by plane, with three-fourths of this air traffic over the Atlantic.

The arrival of these thousands of wounded and sick in this country during the next three months will place a heavy load on our General and Convalescent hospitals. The population of all hospitals in the United States at present is 290,000. By September, this is expected to reach 315,000, taking into consideration the discharge rate.

It can readily be seen that the Medical Department will be operating at capacity for many months to come and there will be a critical need for its professional and civilian personnel during this period.

General Kirk's statement follows:

"The Army Medical Department is well prepared to maintain its record of saving lives and guarding against disease in the second phase of World War II which will be centered in the Pacific. As combat activities increase in that area troops moved from European theaters will find a different type of warfare, different diseases and different methods of combating disease.

"The Medical Department has been preparing for years for its fight on disease in the Pacific. In addition to its intensive research into disease common to that area it has gained much value in practical application of its methods from the campaign already fought.

"In the Pacific areas our fighting men are exposed to many types of disease that are rare in the United States and Europe. However, this should not be considered cause for alarm. With proper preventive measures and medical service the disease rate in the Pacific will be kept to a minmum.

"Every fighting unit in the Pacific area has the same type of medical organization accompanying it as these in other theaters. The chain of evacuation of wounded is well organized and is very effective. Because of geographical and climatic differences certain changes were desirable, but the same high type facilities are available.

"The main disease to be encountered in the Pacific malaria, the dysenteries, scrub typhus, skin infections, schistosomiasis, filariasis and dengue fever. Excellant progress has already been made in keeping the incidence of all of these diseases to a very low degree.

"Malaria, for example, has been reduced to one-fourth its incidence in the early part of the war so that the overall death rate from malaria in the Army is .01 per cent.

"The use of D.D.T. and atabrine is primarily responsible for lowering the incidence rate of the most disabling tropical diseases, The remarkable record in lowering the malaria rate is due also to strict discipline and control measures. Malaria is spread by the anopheles mosquito and the larva. Areas are sprayed with D.D.T. by plane and a five per cent solution of D.D.T sprayed on barracks walls in kitchens and huts kill all mosquitos and flies alighting thereon for months after spraying.

"The dysenteries, so common in the Pacific areas, which are spread by flies are also rendered less prevalent by the use of D.D.T.

"Atabrine has been found more effective as a therapeutic agent in the control of malaria than quinine.

"Filariasis, which is also spread by the mosquito, is reduced by the use of D.D.T. and mosquito control methods.

"Schistosomiasis is caused by small fluke found in pools and running streams which in a matter of seconds burrow through the skin and infect the individual. All water found to contain these flukes is posted and personnel is warned not bathe, wade or wash in it.

"Areas found to contain scrub thyphus are are immediately burned over, clothing is impregnated, and efforts are made to develop a vaccine to counteract it.

"Dengue fever, also spread by the mosquito, is controlled by use of D.D.T. and mosquito abatement.

"It can readily be noted that D. D.T. is one of the miracle developments of this war.

"Last year a tropical disease center was opened by the Army Medical Department at Moore General Hospital, Swannanoa, North Carolina. It was designated as a center for the study and treatment of tropical disease. This center has assisted greatly in the investigation and treatment of these diseases and has reduced the loss of manpower as a result of illness, thereby making an important contribution to the continuing improvement of American medicine.

"In addition to protecting the soldier from diseases of the tropics the Army Medical Department is affording all possible protection against disease and harmful pest which might be brought into the United States by military traffic. This is done through a quarantine branch which works in conjunction with the U. S. Public Health Service and the Navy.

"The Army program includes measures to prevent the importation of dangerous insects from abroad. Extensive insect control programs have been carried out about military stations and airports abroad, using highly effective techniques and agents. Passenger, planes, ships and cargo are sprayed with insecticides in order to eliminate insect risk.

"The battle is also waged through the control of rats and vermine. The most effective means of ridding ships of rats has been to build ships in such a way that rats cannot live or breed aboard them. Modern American ships are practically free of this age-old problem.

"To protect the country against agricultural disease and pest which might be imported, rigid restrictions and inspections are made fully effective for military traffic. Particular stress is laid upon packing material which might harbor insect forms.

"The Army Medical Department has complete medical and sanitary surveys of all the territory in the Pacific which is potential battle ground. The health hazard to soldiers are known to the Medical Corps officers who accompany all invasion troops and that knowledge is distributed to all the men.

"The Army Medical Department has been dong a fine job in the Pacific and will continue to do that job as activities in that theater increases. It is true that the pestilential islands of the Pacific have not been changed into gardens of Eden, but when the deplorable health conditions that existed there are compared with what has been accomplished it is obvious that our victory over the Japs will be hastened.

"While all of this work and planning was going on the increased activity in the Pacific the Army Medical Department during 1944 took care of 4,435,000 patients in hospitals—2,315,000 in the United States and 2,120,000 in hospitals overseas. In addition it provided care for an additional 43,210,000 non-hospitalized patients those with minor infections and injuries who were only temporarily incapacitated.

"It performed the essential functions of caring for men wounded in battle, the injured and the sick to maintain fighting strength with 45,000 medical corps, 15,000 dentists, 52,000 nurses, 2,000 veterinarians, 18,70 medical administrative corps men, 2,500 sanitary corps specialist, 1,000 physical therapists, 1,500 dietitians, 61 pharmacy corps officers, 535,000 enlisted medical aid men and approximately 80,000 civilian employees.

"Illness and recuperation of wounded and injured men does not cease with a formal declaration of the end of hostilities on any front. The care of these men and women is a continuing responsibility of the Medical Department which wil go on for many months in the future. It will increase rather than diminish during the remainder of 1945, according to the best estimates which can be made now. Therefore, as I have said before, medical care by the Army has yet to hit its full stride. One thing I wish to promise is that the best scientific medical attention will continue to be furnished to every man needing it"

Selected

CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

AMERICAN MEDICAL ASSOCIATION

This platform was adopted by the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association on June 22, 1945.

Preamble

The physicians of the United States are interested in extending to all people in all communities the best possible medical care. The Constitution of the United States, the Bill of Rights and the "American Way of Life" are diametrically opposed to regimentation or any form of totalitarianism. According to available evidence in surveys, most of the American people are not interested in testing in the United States experiments in medical care which have already failed in regimented countries.

The physicians of the United States, through the American Medical Association, have stressed repeatedly the necessity for extending to all corners of this great country the availability of aids for diagnosis and treatment, so that dependency will be minimized and independence will be stimulated. American private enterprise has won and is winning the greatest war in the world's history. Private enterprise and initiative manifested through research may conquer cancer, arthritis and other as yet unconquered scourges of humankind. Science, as history well demonstrates, prospers best when free and unshackled.

Program

The physicians represented by the American Medical Association propose the following constructive program for the extension of improved health and medical care to all the people:

1. Sustained production leading to better living conditions with improved housing, nutrition and sanitation which are fundamental to good health; we support progressive action toward achieving these objectives:

2. An extended program of disease prevention with the development or extension of organizations for public health service so that every part of our country will have such service, as rapidly as adequate personnel can be trained.

3. Increased hospitalization insurance on a voluntary basis.

4. The development in or extension to all localities of voluntary sickness insurance plans and provision for the extension of these plans to the needy under the principles already established by the American Medical Association.

5. The provision of hospitalization and medical care to the indigent by local authorities under voluntary hospital and sickness insurance plans.

6. A survey of each state by qualified individuals and agencies to establish the need for additional medical care.

7. Federal aid to states where definite need is demonstrated, to be administered by the proper local agencies of the states involved with the help and advice of the medical profession.

8. Extension of information on these plans to all the people with recognition that such voluntary programs need not involve increased taxation.

9. A continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service.

10. Discharge of physicians from the armed services as rapidly as is consistent with the war effort in order to facilitate redistribution and relocation of physicians in areas needing physicians.

11. Increased availability of medical education to young men and women to provide a greater number of physicians for rural areas.

12. Postponement of consideration of revolutionary changes while 60,000 medical men are in the service voluntarily and while 12,000,000 men and women are in uniform to preserve the American democratic system of government.

13. Adoption of federal legislation to provide for adjustments in draft regulation which will permit students to prepare for and continue the study of medicine.

14. Study of postwar medical personnel requirements with special reference to the needs of the veterans' hospitals, the regular army, navy and United States Public Health Service.

Hurtful Pharisaism

It has become quite an American fashion to seek new political remedial agents which when adopted usually fail to remedy. The War Food Administration is one of these but at best a war-time measure, we hope. And there is the OPA, another war effort, which had a mighty fine opportunity to serve the country until it developed the policing urge rather than distributive efficiency. And there are other of these war agencies that have been guilty of disservice to the citizenry because of plain dumb executives with a yen for regulations of all sorts.

But a more dangerous type of proposed legislation is that commonly known as socialized medicine and discussed ardently by agile planners who favor communal living and hate the profit motive for what reason they do not know. Most of them live well on the tid-bits of the very unfortunate masses whom they self-appointedly represent. They are paid to foment distrust rather than to cure the sick. They are sure that our physicians are gentlemen equipped with heated tongs who torture the poor for pay—very high pay.

They do not like the term "socialized medicine," so they call it insurance. They assume that once the direction of "healing the sick" is a governmental responsibility that disease and ill-health will disappear like dew before the sun. What they would really say if they were quite frank in their advocacy of this latest communal effort is that it would provide job upon job for social workers; case upon case for indifferent and illtrained nurses; hospital management under the direction of inexperienced business managers and a host of unambitious physicians and surgeons seeking a "life pension" as the top unit of this communal enterprise.

We have had the opportunity to observe fine physicians in action where the poor are concerned. They have given their time and experience and fine knowledge to the cure of the unfortunates brought to them. Their price scale to these people more nearly approach "zero" than any other figure. Of course, it is foolishly stated that this charity is charged against the bills of their more fortunate customers. And that, too, is a libel.

We often wonder why people like Wade Church and hundreds of his type do not take up the healing of the poor and the relief of the distressed as a private profession rather than a public duty with the tax-paying public assuming the responsibility for their easy living while they contentiously pull down splendid institutions which they would replace with "wheezy" imitations.

They are the lads that crowd the temple steps and shout their goodness to the multitudes. For acclaim merely? Not at all. They are professional operators for pay; exhibitionists of a sort who always allure weak and equally hypocritical politicians to their side and for whose adulation they are presumed to PAY in votes. In short, they are the modern pharisees. They will orate on human misery at every opportunity, or without it, and glibly recite percentage figures that will make one shudder. But they never produce living proof of their assertions.

With all their faults, and we presume they have some, the medical practitioners, if called upon to do so, could produce literally thousands of unfortunates who were sick and have been restored to health; who have been maimed and were healed. And for what fee? Little or nothing.

In practically every county in this country excellent hospitals have been erected for the treatment of the unfortunate poor. And who are the persons who attend them? The Wade Churches, the politicians who breed his kind? Not at all, rather men of high professional attainment and without pay. Who never refer to these institutions as "my hospital or our hospital," on their own time and at their own expense without any display or fuss and feathers.

Most of us worry over our aches and pains. Few of us contribute much to our physical welfare. We fear to die but fail to help ourselves to live. We will shoot hundreds of dollars for pleasure but rarely a buck for physical check-up. We will do everything humanly possible to make a physician's life miserable when we are sick, and when through patient care he has returned us to health, we will invite tonguesters like Church to come in and tell us we ought to kick these skillful men into the discard and set up a politically controlled fraternity to take their place.

Tucson Daily Citizen
June 28, 1945

CONTROL OF MALARIA

This release has been cleared for publication by the Press Censor, India Burma Theater

NEW DELHI, INDIA: While American armies have been winning decisive victories in the Far East, little known medical units in India and Burma have been winning a prolonged, exacting struggle aginst one of mankind's most dreaded diseases—malaria.

One of the world's worst malaria areas stretched across India and Burma, where Americans in 1942 were assigned to work and fight after the Japanese conquest of Burma and the enemy's initial threat to the security of India itself.

Exact figures cannot be given because of military security, but rigid malaria control in the India Burma theater has cut malarial incidence among American troops to a fraction of the casualties from the disease during the early appearance of American troops in Upper Assam

and northern Burma areas where the native population was infected almost 100 per cent.

Stringent control measures have reduced the malaria rate to less than one-eight of the original figures predicted by British officials.

When work began on the Stilwell Road, troops in the Ledo area were infected in large numbers, and those who hadn't yet experienced the alternating chills and fever of malaria were, according to one Army official, expecting to be stricken with the disease.

By early 1945, as troops once again awaited the approach of the drenching monsoon rains and the resultant climb in malaria incidence, malarialogists of the theater surgeon's office and the troops themselves were certain that their malaria rate would not climb on the charts which showed a sharp, steady drop over the months during which Americans have been stationed in this part of the world.

Troops in India and Burma were charged with supplying China. To do this, a land route was needed to augment air suply after the old Burma road was closed. The area over which the land route necessarily had to run because of enemy occupation, extended through the worst malaria area in the world.

When troops first arrived in India, they were told flatly their job just couldn't be accomplished. And the main reasons were Jap opposition or terrain or weather. All of these were contributory, but the greatest deterreant of all to the accomplishment of the American mission was malaria.

These predictions of failure were alarmist and defeatist, but they were based on vital statistics which showed that more than 100,000,000 persons are afflicted with malaria every year in India. More than 1,000,000 of these die from the disease every year.

At that time early 1942 Indian and British troops fighting in the 100 per cent infected areas of Assam and Burma had suffered many times more casualties from malaria than from enemy action. Often malaria alone decided the issue, and quite often the decision was in favor of the Japanese.

Americans were inclined to heed the pessimistic statements. They did not belittle the predictions of their allies nor did they place unlimited faith in their ability to conquer the disease. They were sobered by the knowledge that at that time malaria had not been conquered in the Southwest Pacific. Malaria for a time held the balance of power in that area, and it consistently claimed four to six times the casualties in battle.

For 20 years an American doctor, Earl M. Rice, had operated his own hospital in Assam. He knew the country intimately, he had made a lifetime study of malaria, he had been closely associated with both British and Indians and he spoke the native language fluently.

Tropical medicine was Rice's specialty. He was a member of the American Society of Tropical Medicine and a fellow of the Royal Tropical Medicine. He was born in 1891 in Hartford, Conn., earned his M. D. degree at the University of Oregon in 1915, and claimed South Carolina as his legal residence.

With a specialist's knowledge of malaria and with his long residence in the heart of the area where malaria had to be whipped, he was the ideal man to handle the job.

Rice was commissioned a lieutenant colonel in the Army medical corps and assigned the task of controlling the scourge which, if left unchecked, would most surely neutralize the American effort in India and Burma.

Meantime, as a result of medical experience on Guadalcanal, two types of organizations were being formed and trained in the United States to combat malaria, control units and survey units.

Control units consisted of sanitary corps officers with engineering background and all enlisted men. Their job was actual physical control, drainage to eliminate breeding spots, oil and Paris Green (an arsenic compound) spraying to kill larvae, mosquito-proofing quarters to prevent bites by the infected insect, and spraying to kill the adult mosquito.

Survey units laid the groundwork for control. They evaulated areas as to their relative importance as breeding centers, decided which to treat first, and examined blood and spleens of native children to determine incidence. Their personnel consisted of two officers, an entymologist and a parasitologist, and 11 enlisted men.

Equipped with complete portable laboratories, these highly trained specialists worked ahead of and with the control units. When they found enlarged spleens in children up to 12 years of age, they knew they were dealing with a populatoin actively infected with malaria. (Children provide a more accurate criterion of the degree of active infection because of the immunity fac-

tors in adults which make a spleen reading unreliable.) Then they took blood smears to determine the parasites.

Malarialogists say that a 25 per cent spleen rate is bad, but in Assam and Burma the rate consistently exceeds 90 per cent and often rose to 100 per cent.

Shortly after Col. Rice took over his tremendous job, two of each of these units were obtained from the United States and put to work. During the ensuing period, the number of survey and control units increased greately.

Normal delays were encountered during this early period because of the inability to get equipment and supplies rapidly from the states Had not the War Department given malaria control supplies a shipment priority equal to that of food and ammunition, the fight would have been prolonged at the expense of soldiers' health and lives.

Sections of India and Burma each presented problems peculiar to the area. The *anopheles philippinensis* was worst in Bengal. This species multiplied rapidly in innumerable ponds and tanks which were vitually impossible to drain.

Assan, dotted with tea plantations and rice paddies, was found to be a hyperendemic area, with 50 per cent or more of the population stricken. Seepage areas were worst during the monsoons. And the *anopheles minimus*, probably the most violent mosquito carrier known, was the prevalent type of species.

In the Patwai hills, foothills of the Himalaya mountains, along the Assan-Burma border, where the Stilwell Road now treads its way toward China, thick vegetation along mountain streams offered ideal breeding places for the *anopheles minimus*.

As the Road pushed its way over the mountains and dropped into the Hukawng valley, the survey found in the dense virgin tropical forest not only the *minimus* but its dread runner-up, the *anopheles leucosphyrus*. One of the reasons that the Hukawng valley has remained uninhabited is because of the prevalence of these two species. Yet along this route the Americans forged an all-weather road and fought their battles against the Japs.

New problems were encountered in the rice paddies around Myitkyina and the swamps, large depressions, and innumerable shell holes, perfect breeding places, around Bahmo.

Drainage and Paris Green and oil sprays to prevent breeding were not enough. Sprays to kill the mosquito itself and screening and netting were necessary as a barrier between the mosquito and the soldier's skin.

Aerosol bombs, ingenious metal cylinders containing pyrethrum and freon-12, were used. Emitting their mist in the mosquitos' direction, they meant instant death for the mosquito. Their compactness offered convenience and effectiveness for field units which could not be burdened with massive equipment. The contents of one aerosol bomb equal a gallon of liquid spray.

Millions of yards of hessian cloth, a type of burlap made from Indian jute, was used to combat the mosquito menace. With the help of native labor, it was used to line loosely woven bamboo bashas, tents, and bombed buildings used temporarily as Army billets. Everything was mosquito-proofed. Whenever fast-moving troops stopped for a breather, the work began.

Troops engaged in combat and in the building of the Stilwell Road could derive only limited benefit form these more or less stationery measures. Each man was ordered to take certain recognized precautions himself. Wrist and ankles were covered at night, and liquid repellent (dimethyl-phthalate) was spread on hands and face at nights.

Even in the forward areas, troops saw regular movies. Areas were enclosed and attendants were instructed at the gate to apply their repellent before gaining admittance. One application was effective until the men could get under their nets for sleeping.

The Army manuals say that camp sites should be chosen some distance from the native population. But labor was needed, transportation was limited or non-existent, and time was valuable; so the soldiers had to live in close proximity to the small native centers of population. Native huts and entire villages were sprayed with liquid insecticides.

Late in 1944, the India Burma theater began to receive quantities of the new wonder chemical, DDT (dichoro-diphenyl-trichlorethane). It was a substance which would retain its killing power for several months once applied to a surface. It was possible now to use it in the native villages and habitations which had always constituted a major menace as reservoirs of infection. To cover large areas, DDT was sometimes sprayed from planes.

These measures had the mosquito on the run, for permanently situated individuals. But the one big weak link in all control measures is the person who moves in and out of an area, who doesn't stay put, who is cautious part of the time and careless the rest.

Atabrine, one of the wonder drugs of the war, provided the near-solution to this problem. Malarialogists in India and Burma declare its value far exceeds that of quinine in fighting malaria. Even if unlimited supplies of quinine were available, it is doubtful that the drug would be used in any quanity.

Atabrine doesn't prevent a person from contracting the benign type of malaria, but will suppress it so that he doesn't suffer from its effects. It usually does prevent malignant malaria.

Great strides have been made since Col. Rice began the pioneering job of stamping out malaria in the worst area in the world. It hasn't been stamped out completely, nor will it be until control measures are universally adopted. But the rate for American troops has dropped below all previous hopes, and there's every reason to believe it will continue to decrease.

Col. Rice has moved out of Assam to Ceylon, where for the past 17 months he has served as medical adviser to Lord Louis Mountbatten, supreme commander of the Southeast Asia Command.

The malaria fight at present in India Burma is being carried on under the direction of Colonel Karl R. Lundeberg, chief of the preventive medicine section in the theater surgeon's office. A native of Kenyon, Minn., Col. Lundeberg was recently awarded the Legion of Merit for his work in preventive medicine in the Surgeon General's office.

Direct staff supervision of the control fight is handled by Major Maurice Seltzer, of Philadelphia, Pa. Malarialogists in each of three districts in the India Burma theater coordinate the activities of malaria units, both survey and control.

These highly trained technicians have worked with the troops and ahead of the troops, in combat, on the Stilwell Road, through the jungles, in and around all types of installations. Theirs has been a major contribution to ultimate total victory. Without them, the Stilwell Road might never have been built and the battle for northern Burma might never have been won.

THE EYE-BANK FOR SIGHT RESTORATION INC.

The Eye-Bank has been established in order to make available to hospitals and surgeons who are qualified to perform the corneal graft operation a supply of fresh or preserved corneal tissue, whereever and whenever needed. In brief, the objectives are:

To encourage and extend, by teaching and research, the knowledge and skill required to perform the operation. Money is needed to extend the horizon of this work. Fellowship will be established when sufficient funds have been raised. Qualified eye institutions throughout the country may apply for these fellowships.

To establish sources of supply of salvaged eyes and corneal tissues; to establish an eye-bank for the collection, preparation, storage and redistribution of salvaged eyes and corneal tisues.

Any eye which is sent to the Eye-Bank will have a complete pathological study made and a report sent to the institution which supplied the eye, on request; also bacteriological studies will be made for possible contamination, etc. Institutions desirous of making their own pathological examination will have the eye returned to them in the proper preservative fluid. There are naurally many smaller institutions that do not have the facilities for the proper pathological examination of eyes, and one purpose of the Eye-Bank is to encourage complete pathological studies of all eye tissues sent to it.

Initially, the needed space and personnel has been made available in the Manhattan Eye, Ear and Throat Hospital. The Eye-Bank will acquire additional space, personnel and equipment as needed, so as to serve not only the New York area but localities throughout the country.

A subsidiary function of the Eye-Bank is to stimulate an interest in research work on blindness resulting from corneal damage for which fellowship and scholarships are to be established and distributed to qualified institutions throughout the country where this work can be performed.

Selected

GENERAL SIMMONS TALKS ON TROPICAL DISEASES

Brigadier General James S. Simmons, USA, The Chief of the Preventive Medicine Service, Office of The Surgeon General, who recently

returned from an inspection trip of preventive medicine activities in the Pacific theater of war, spoke on "Progress in the Army's Fight Against Tropical Disease" at the 50th anniversary meeting of the Alpha Kappa Kappa Medical Fraternity of the University of Michigan, Ann Arbor, Mich. Highlights of his report follow:

Malaria: At one time in the Southwest Pacific, casualties from malaria were high and more than 30 per cent of the hospital beds were occupied by malaria patients. Now, due to widespread suppressive use of atabrine and to the establishment of good mosquito control in all base areas, admission rates from malaria have decreased markedly.

Dengue: A peak rate of 138 per 1000 per annum occured in Pacific Ocean Areas in September, 1944. An outbreak on Saipan subsided abruptly following the spraying of D.D.T. by airplanes. Since then rates in that theater have been below 30 per 1000 per annum.

Diarrhea and the Dysenteries: Rates reflect sanitary conditions, including food and water sanitation and fly control. The new insecticide D.D.T. is greatly simplifying the control of flies in latrines, mess halls and kitchens. On the whole, the situation in Pacific Ocean Areas has been satisfactory.

Scrub Typhus: We now have effective methods for the control of this disease by attacking the mites which transmit it.

Infectious Hepatitis: Great progress has been made in the study of the epidemiology of this disease by Commission members of the Army Epidemiological Board, and the work is continuing.

Filariasis: Its incidence at present is not alarming. Mosquito control prevents this disease.

Schistosomiasis: On Leyte all dangerous streams have been posted with signs warning the troops against the dangerous Japanese blood flukes. Educational teams are being developed to travel from unit to unit to acquaint the troops with the dangers of bathing or wading in infested fresh water.

In conclusion General Simmons said that he was proud of the way the Medical Department has carried out the Army's program of preventive medicine, and of the remarkable results obtained.

Selected

PRESENT DAY TREATMENT OF ESSENTIAL HYPERTENSION

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M. Clin. North America, 28: 1141-53, Sept. 1944

Treatment of essential hypertension is of two types, treatment of the disease itself and treatment of the symptoms. Three groups of symptoms are discussed with their therapy. The less common causes of high blood pressure are described. With these out and with no organic disorder found to cause the condition, the disease is termed "essential" or "primary" hypertension. An enlarged heart, thickened arteries, abnormal ocular fundi, some albuminuria, and red cells in the urine have been found to be the result, no cause, or hypertension.

A diagnosis of hypertension is made wherever the blood pressure is frequently over 140 mm. or mercury systolic or 90 diastolic, and sepecially if there is not a rapid pulse. If such a patient has a parent with hypertension, cerebrel hemorrhage, or one who died suddenly, such a slight elevation in blood pressure is considered sure evidence or an essential hypertension.

The hypertensive patient is described as having excessive emotional reactions or physical drive, a serious planning nature, a quick temper or a supersensitive di position. Many patients have no early symptons, and the condition is revealed by routine physical examination.

Blood pressure levels vary greately and may be elevated by emotions, and a patient may appear upon examination to have marked hypertension but show only slight or no elevation when at home. Usually the blood pressure is found to drop progressively from the first visit to the fifth or sixth visit.

The three groups of symptoms in essential hypertension are; (1) psychosomatic symptoms, (2) vasospastic symptoms and (3) organic symptoms. The first has headaches, dizziness, weakness, insomnia, constipation or diarrhea, urinary frquency and bitter tastes. The second may have no headaches or other symptoms for years, although having a blood pressure of 250 to 300 mm. systolic. In others of this group there are great blood pressure elevations with headaches, convulsions, and temporary pareses due probably to vascular spasm. The third group has symptoms of shortness of breath caused by cardiac enlargement and failure, nocturia resulting from renal damage, angina pectoris from arteriosclerotic coronary arteries, cardiac asthma and cerebral hemorrhage.

The psychoneurotic symptoms are treated by psychotherapy and use of sedatives. Patients suffering from continous insomnia are given phenobarbital (0.1 to 0.2 gm. or 1½ to 3 gr.) or chloral hydrate (0.6 to 1.3 gm. or 10 to 20 grains) or amytal (0.1 to 0.2 gm. or 1½ to 3 grains) each night until sleep has restored strength and energy. Emotional concern over symptoms may be relieved by use of placebos administered with enthusiasm.

There are only two methods of lowering the hypertension itself, either by use of potassium thiocyanate or by smpathectomy. In using potassium thiocyanate arrangements must be made for the necessary chemical determinations of blood levels. Counterindications for the use of this drug are renal function impairment, congestive heart failure, easily provoked attacks of angina pectoris or marked debility.

The dosage of potassium thiocyanate is 1 to 3 grains (0.065 to 0.2 gm.) of enseal (Lilly). The initial dose is 0.2 gm. three times daily for three days, then 0.2 gm. twice a day for four days. At the end of the first week a 10 cc. sample of blood is taken Should the blood level be 6 mg. or less, 0.2 may be given two times a day for another week. Again the blood level is ascertained, and if not above 8 gm., the dosage is the same for the third week. If it is above 8 gm. at the end of the second week, the dosage is reduced and omitted one day in the third week. Dosage is continued indefinitely with blood determinations every three of four weeks. Blood should be maintained between 8 and 10 mg., but levels may be 10 to 12 mg. if blood levels can be taken every two weeks.

Fatigue may occur at the levels of 6 to 8 mg., but toxic symptoms do not appear until levels are 10 to 12 mg. The patient should discontinue the drug when weakness or fatigue occurs until the physician is seen. Fatigue with a blood level below 8 mg. is not important.

Decreased dosage is advised when nausea, vomiting, abdominal cramps, diarrhea or dermatitis occurs. Psychosis, delirium and collapse require discontinuance of the drug. The drug is excreted in two to three weeks. If discontinued, after that time symptoms will recur and the blood pressure will rise.

Indications for sympathectomy are discussed. In these cases surgery is considered of value even if relief from symptoms endures for only three to five years. Mortality is about 3 per cent. The operation is followed by three to four months of disability.

Treatment by diets is of no value and no drugs other than the thiocyanates are effective.

Reprint from "Quarterly Review of Medicine", February 1945.

DISEASES OF THE CARDIOVASCULAR SYSTEM

Seven Common and Important Problems In The Management
M. Clin. North America, 28: 1129-40, Sept. 1944.

PAUL D. WHITE
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M. Clin. Naoth America, 28: 1129-40, Sept. 1944

Seven cases of heart disease are described to illustrate important problems incurred in treating patients with cardiovascular symptoms and other signs frequently observed by general practitioners. The first is that of acute rheumatic heart disease in a boy of 10. Bed rest is most important in these cases. Drugs are of slight importance except salicylates given for joint discomfort and effusions. Digitalis is given under close supervision if congestive heart failure develops, occasionally supplemented by diuretic drugs such as thesodate. Quinidine is given for fibrillation. Injection with hemolytic streptococci is the precipitating factor in rheumatic heart disease and protection should be given against contact with infected persons.

The second case discussed is that of subacute bacterial endocarditis in a woman of 20. Whereas the death rate was formally about 100 per cent in this disease, mortality has been greatly reduced by use of sulfonamides. The treatment used is an initial dose of 2 gr. of sulfapyridine, followed by 2 gm. in two hours, then 1 gm. every four hours until the blood level of free sulfapyridine is about 10 mg. 100 cc. The level is maintained for weeks by properly adjusted dosage.

Massive doses of penicillin have been found effective in control of the infection in one-third of the cases. The drug is administered in doses of 200,000 international units daily intravenously or intramuscularly for two to three weeks. The drug is discontinued if fever disappears and the blood stream is sterilized. Recurrence of the infection is followed by further dosage. Penicillin does not have the toxic reactions of sulfonamides.

The third case is one of neurocirculatory asthma in a soldier of 25. There is no specific treatment, but sympathetic reassurance and appreciation of the limitations of the patient are advised. The fourth case described is a malignant hypertension with cardiac enlargement in a woman of 40. The case received a "Smithwick hypertensive work-up" and was found suitable for Smithwick splanchnic resection. The technique is described.

The fifth case is that or a man of 40 with angina pectoris decubitus. The symptons and prognosis are discussed. Life expectancy is the same as for angina pectoris, 9 to 10 years. Rest is the only treatment under the tongue to prevent attacts of pain or sodium nitrate or erythrol tetranitrate ½ to 1 grain 2 to 3 times daily, especially at bedtime. Occasionally enteric coated aminophylline tablets 3 grains or 4 times daily are found helpful. Radical measures are rarely needed.

Insomnia due to left ventricular weakness in a man of 60 is the sixth case. The patient was given diuretic drug and complete rest for two weeks in addition to digitalis. Intravenous mercurial injections (mercupurin 1 to 2 cc.) were given every two, three or four days for several doses. Supplementing this drug, ammonium chloride 1 gr. (two 7½ grain enteric-coated tablets) 4 times a day is helpful. Fluid intake is reduced to 40 ounces in twenty-four hours.

The last case cited, a 65-year-old patient, suffered with troublesome and crippling attacks of cardiac arrhythmia. Quinidine sulfate given in doses of 6 grains at two to four-hour intervals for 1, 2, or 3 doses brought cessation of attacks, but the attacks finally became more and more frequent until they occurred every day or two. It is recommended that quinidine be omitted in such cases and full digitalization be maintained to keep the ventricular rate under control and prevent attacks. The patient takes a daily dose of 1 to 1½ grains of the powdered leaf in pill or powder form and lives a perfectly normal life.

Quarterly Review of Medicine, February 1945.

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* Terms expiring in 1945 will hold until 1946.

President's Message

The summer is flitting by and the work of the Association is getting well under way for the winter season. *The Medical Quarter Hour*, the weekly radio programs sponsored by the Association, have continued through the summer with a timely series of broadcast on "*Keep Cool*". The Committee on Public Health Education report a nice public response to these broadcasts.

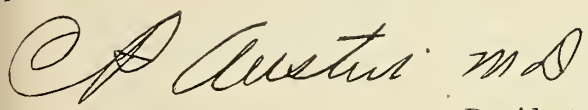
Of special interest to the Council has been the study of the Committee on Medical Economics relating to a *Medical Service Plan* for Arizona. A short time back, the membership were sent questionnaires asking three questions: 1. Whether now is the time to inaugurate a *Medical Service Plan* in Arizona, 2. Whether such a plan should include both medical and surgical care at the outset, or 3. Whether such a plan should include major surgery and obstetrics for the initial service. The replies were in the affirmative on question 1, with question 3 affirmative over question 2. It is felt that, taking the problems of administration into consideration, it would be wise to include surgery and obstetrics in the initial plan and add medical service as a reserve is compounded.

Mr L. Donald Lau, Executive Director of the Blue Cross Hospital Service Plan for Arizona, was invited to address the Council and the House as to administrative aspects of a medical service plan. Mr. Lau pointed out just how the Blue Cross along with their hospital commitments, assisted in many states in the administration of a Medical Service Plan.

The Association has also been in touch with the Colorado Medical Service Plan and will mail the membership, in the near future, pamphlets covering benefits, fees, and rules and regulations of the Colorado plan as guides for Arizona studies. Each member is urged to read this material when he receives it and to reply

to the letter accompanying the mailing. In addition, the Council is sending Mrs Coleman of the central office to Denver to study the administrative angles of such a medical service so that we may have first hand information as to cost, and all procedures. California will be included in the itinerary as that state also has a medical service plan under the direction of the medical association as you probably know. This information and material will be in hand in early August, after which time the Council will again convene and make final recommendations to the membership.

The membership is therefore urged to be on its toes in this matter and let the Committee on Medical Economics have its full reaction to the proposal of *a Medical Service Plan for Arizona* - operated and controlled by the medical profession. Fraternally yours



President.

SEROLOGY AND THE DIAGNOSIS OF SYPHILIS

(Continued from page 241)

rule out the more common non-spyhilitics causes of false positive reaction should be done.

It is important that antisyphilitic treatment be withheld until conditions other than syphilis are ruled out. If treatmentt is started at once the opportunity for making an accurate diagnosis is often lost. The serology may become negative after a few injections and one is at a loss to know whether this represents response to therapy or merely reflects the facts that the patient never had syphilis at all.

The serologic tests for syphilis are no different than any other laboratory examination. They add to the diagnostic material but are not necessarily in and of themselves absolutely diagnostic. They are an aid and frequently a valuable aid in diagnosis, but they are all, only additional information and should be considered as such. No individual sitting behind a desk can make a diagonsis from a report written on a piece of paper with no knowledge about the patient.

507 Professonal Building

REFERENCES

1. Kahn, R. L.: Serology in syphilis control. Baltimore, Md.: The Williams and Wilkins Company, 1942, p. 19.
2 Stokes, J. H.: Modern clinical syphilology, ed. 2, Philadelphia, W. B. Saunders Company, 1943, p. 131.
3. Rein, Charles R. and Elsberg, E. S.: Studies on the incidence and nature of false positive serologic reactions for syphilis. Am. J. Clin. Path., Vol. 14: p. 461. Sept. 1944.

Staff Meetings

ST. MONICA'S HOSPITAL, PHOENIX

May 17, 1945

Presentation of Case with interesting diagnostic problems—Dr. J. W. Pennington.

GOOD SAMARITAN HOSPITAL, PHOENIX

May, 1945

Report of a Case of Coma—Dr. L. D. Beck.

June 25, 1945

Scorpion Sting—Dr. E. H. Running.

ST. JOSEPH'S HOSPITAL, PHOENIX

May 14, 1945

Case of Fatal Inversion of the Uterus—Dr. A. Cheiker.

Case of Post-Partum Death, Cause Undertermined—Dr. C. J. Barker Sr.

June 11, 1945

Multiple Aspiration Treatment of Empyema, with Penicillin, with report of a case—Dr. E. H. Running.

Case of Alkalosis—Dr. R. H. Stevens.

ST. MARY'S HOSPITAL, TUCSON

May 16, 1945

Splenectomy, discussion of a case with post operative care—Dr. D. Daughtry.

Screw-worm Infection of Paranasal sinuses—Dr. E. Brown.

The officers for the coming year 1945-46 to begin duties in fall:

President—Dr. R. W. Rudolph

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MARICOPA COUNTY MEDICAL SOCIETY

May 7, 1945

Arizona Vocational Rehabilitation Program—Mr. Harry V. Bene, State Supervisor.

Serology and Diagnosis in Syphilis—Dr. Thomas T. Frost.

June 4, 1945

Treatment of Hip Fractures—Dr. James Lytton-Smith.

MEDICO - LEGAL SECTION

IN THE SUPREME COURT OF THE STATE OF ARIZONA

LA PRADE, J.:

On and previous to July 24, 1943, petitioner was employed by respondent employers as a structural iron worker in the construction of the aluminum plant west of the City of Phoenix, Arizona. On July 24th, petitioner was overcome with heat, later diagnosed by his attending physician as "heat stroke", and became temporarily unemployable. In due time, petitioner filed his claim. liability was admitted by the employer, and payments of compensati ofnor temporary total disability were commenced, pursuant to the Commission's order dated September 3, 1943. The final report of I. L. Garrison, the doctor in attendance, gave October 1, 1943 as the date upon which petitioner was able to work.

Petitioner worked intermittently at his regular trade from August 9, 1943 until December 8, 1943, when he was referred to a board oof medical consultants composed of Drs. I. L. Garrison, A. M. Tuthill, and H. J. McKeown. They recommended that certain laboratory work be done. Petitioner thereupon was admitted to the hospital, and this phase of the medical investigation was carried out by Dr. Maurice Rosenthal.

On March 14, 1944, th eCommission rendered its findings and award for temporary total disability from July 26, 1943 to and including October 3, 1943. Petitioner, being dissatisfied with the award, filed his Petition and Application for a Rehearing. The basis of his complaint, as stated in his petition, was

> "That he still suffers from the injury received by him; that he is unable to carry on his employment of the type and nature held by him because of physical disability caused by accident, subject of this petition for rehearing; that medical examination at this time will show that he suffers from permanent injuries, and disabilities."

The petition for rehearing was granted and the hearings held on April 27, 1944, after which, on June 28, 1944, the Commission, in effect, affirmed its award of March 14, 1944. These findings and award on rehearing were concurred in by two commissioners only. The third commissioner refused to concur. One of its findings on the rehearing was:

> "That the disability from which this applicant claims to have suffered or claims to be sufferni,g after October 3, 1943, is not proximatetly the result of any personal injury sustained by accident arising out of and in the course of his said employment by the above-named defendent employer."

Petitioner has brought this decision here for review.

Petitioner in his Petition for Writ of Certiorari, among other things, alleges:

(1) That the said findings and award on rehearing are not supported by the evidence, and are contrary to the evidence.

(2) That the evidence shows that the petitioner is still suffering from the accident and injury sustained by him, and will continue to so suffer, and that such acciden tand injury may become fatal, and may and usually does result in death, epilepsy, or insanity.

(3) That said findings and award of the Commission are not supported by the evidence, and are arbitrary, in excess, and beyond its power; that the said findings do not support such award.

The sole question presented for review is whether or not there is substantial and competent evidence supporting the findings and award of the Commission that the applicant suffered no permanent disability as a result of the accident of July 24, 1943.

This court in Federal Mut. L. Ins. Co. v. Ind. Com. (1926), 31 Ariz. 224, 252 Pac. 512, announced the rule, wmich it has uniformly followed, and from which it has never departed, that when the Industrial Commission acts within its jurisdiction, and acts judicially, and there is any reasonable evidence—whether in conflict or not,—and wher ethe evidence is such that reasonable men may differ as to its probative force, that the findings of the Commission are conclusive and binding on the Supreme Court. Blankenship v. Ind. Com. (1928), 34 Ariz. 2, 267 Pac. 203; Johnson v. Ind. Com. (1929), 35 Ariz. 19, 274 Pac. 161; Moeur v. Farm Builders Corporation (1929), 35 Ariz. 130, 274 Pac. 1043; Young v. Hodgman and MacVicar (1933), 42 Ariz. 370, 26 Pac. (2d) 355; King v. Orr (1942), 59 Ariz. 234, 125 Pac. (2d) 699.

Admittedly, head stroke or sun stroke is regarded by both the medical authorities and the courts as a serious and frequently disastrous condition, often resulting in death and disability, and when proven is held to be compensable.

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L. W. Daily Construct. Co. vs. Carpenter (1944), 53 N. E. (2d) 190 (Ind. App.); Fidelity and Casualty Co. vs. Adams (1943), 28 S. E. (2d) 79 (Georgia App.); Malone vs. Ind. Com. (1942), 43 N. E. (2d) 266 (Ohio); Douglas vs. Riggs Disler Co. 1939, 5 All. (2d) 873 (New Jersey); Oklahoma Gas and Electric Co. vs. Maloney (1939), 88 Pac. (2d) 363 (Okla.))

In view of the allegations of the petition for the writ challenging the sufficiency of the evidence to substantiate the conclusion of the Commission, we are compelled to examine all the evidence, not as triers of the facts, but for the purpose of determining whether there was before the triers substantial evidence supporting its findings and conclusions. (Cases supra.

The following is a rather comprehensive digest of the evidence presented to the Commission and the consultant board of doctors:

On the day of the accident, at about the hour oof 11 a.m. (M.W.T.), petitioner was employed as an iron worker, working up against a wall where there was no shade, engaged in burning steel with a torch. The official temperature for that date was 112° F. The petitioner felt dizzy and suffered from a headache. He associated his condition with his work. He stated that he did not know what was the matter with him; that he wanted to get hom; and, that he was sick. He asked to be dismissed from his work, but upon the request of his foreman remaned until 3 p. m. At the end of the shift he claims that he staggered from his place of work to the gate where he was met by his wife who took him to his home where he had to be assisted into the house. After he arrived home, he took some home remedies and bathed himself with cold water for the two following days.

On July 26th, petitioner visited the office of Dr. Garrison, who testified that when petitioner arrived at his office he had a blood pressure of 115/90, with pulse pressure of 25, which he deemed to be abnormal; that his face was blood-red, and that he was practically in collapse, and complained of a pain in the back of his head and sickness of the stomach. Dr. Garrison made a diagnosis of heat stroke. He testified that the effects may or may not affect the central nervous system, and, if so, it might take years to determine such fact. It further appears that petitioner worked at his usual trade and drew wages at the union scale for 19½ days between

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October 4, 194 3and January 24, 1944. Petitioner was employed at his trade at the time of the rehearing. Petitioner testified, among other things, that he had repeatedly suffered spells of dizziness since the accident; that on one of the jobs upon which he had been employed since the accident, which required his working above the ground, he had suffered from the "shakes", became dizzy and sick, and was afraid that he would fall; that he thereafter got a job upon the ground; that he became so nervous that he could not hold the arc in the process of welding; that he later secured a job as a "lay-out" foreman; and, that he was not able to perform satisfactorily the duties required due to nervousness and an inability to coordinate his movements with his thoughts. Petitioner testified that he was quite concerned over his mental condition; that he became faint at times, had to stop and steady himself; that he could not again hold a job as an iron worker in competition with fellow workers; and, that he wanted medical relief so that he might confidently expect to produce the results that were expected of him as an iron worker.

Petitioner's wife substantiated his claims as to his outward physical condition on the day of the accident and several days thereafter, and his apparent spells of dizziness and instability of his legs. Ralph C. Shobe, business agent of the Iron Workers Union, testified that he was personally acquainted with the petitioner, and had worked with him as an iron worker prior to the accident in question; that petitionerj was a skilled craftsman; that it had been reported to him, subsequent to the accident, that the petitioner got the "shakes" on the job; and, that from these reports he had determined that it was unsafe to send the petitioner out on jobs which would call for work at elevations above the ground.

The report of the board of consultants filed January 14, 1944 reads as follows:

> "We find at this time there is no evidence, objective or subjective, of any industrial pathology that is compensable."

During the progress of the rehearing, the portion of this finding to the effect that there were no subjective complaints was called to the attention of the doctors. They at that time admitted that in taking the history of the case during their consultation they had considered

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the subjective complaints of the petitioner and were aware of their climaxed existence. They further admitted that the word "subjective" should not have been included in the finding. At the time of the rehearing April 27, 1944, Dr. Tuthill testified that it was his opinion that the petitioner did not suffer a heat stroke or heat exhaustio non July 24th; that if the petitioner did have a heat stroke, it was very likely he would have more trouble; that at the time of his examination of petitioner in December he could find nothing wrong with petitioner and knew of no reason why petitioner wasn't then able to return to work.

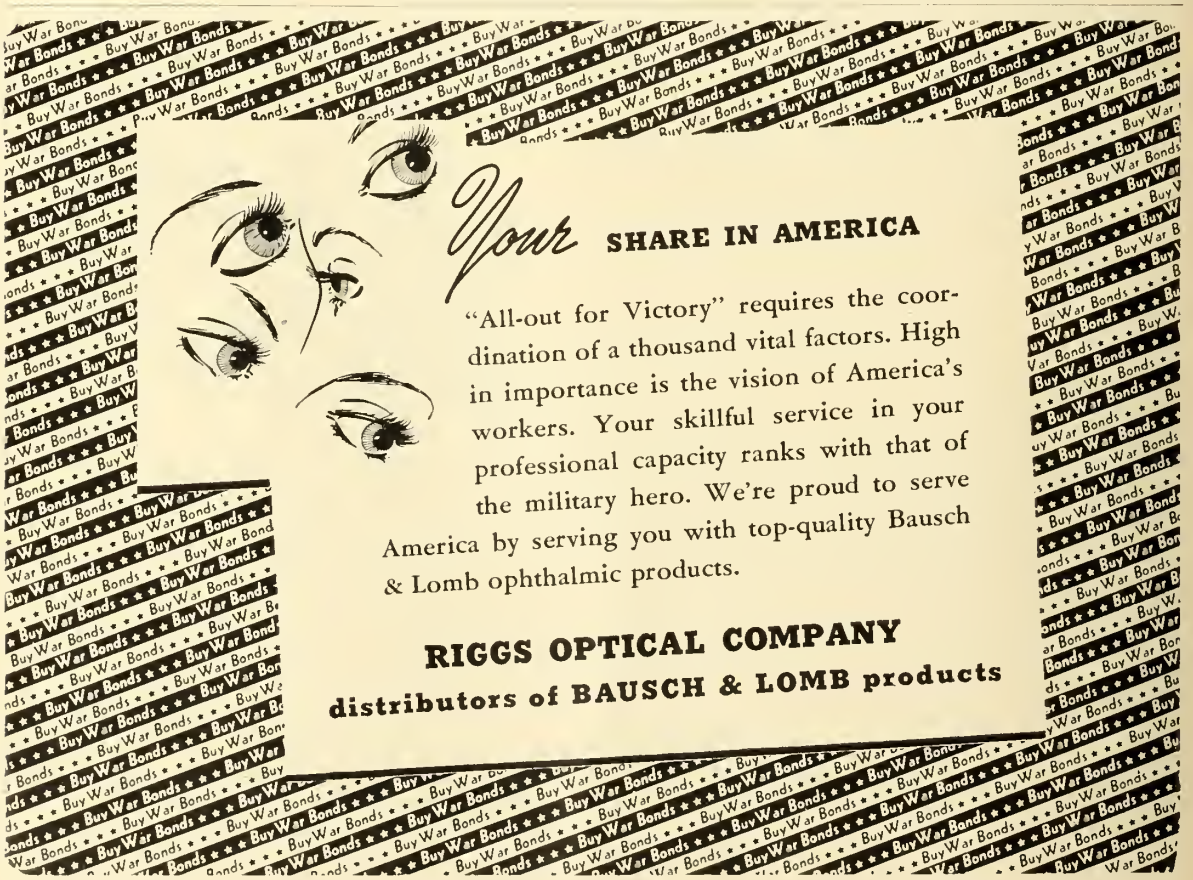
The testimony of Dr. H. J. McKeown corroborated the testimony of Dr. Tuthill. He attributed petitioner's complaints to a neurosis.

Dr. Rosenthal testified that he could find no "objective findings or abnormalities that he could connect with heat stroke or heat shock."

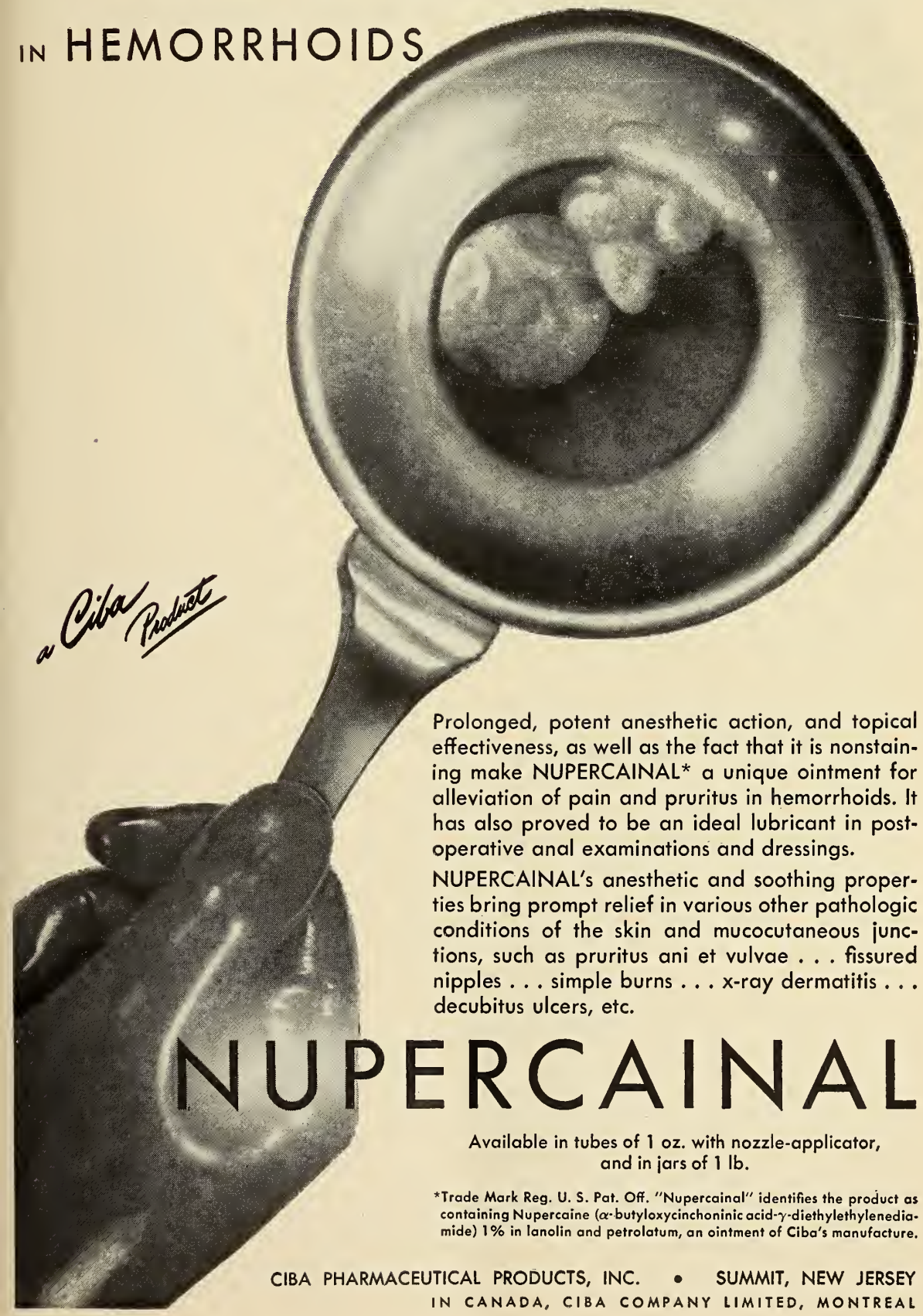
Dr. Louis J. Saxe, a practicing physician and surgeon specializing in the field of neurology and psychiatry, testified that as a result of his examination made on April 17, 1944, he could fid nno "objective condition" to account for the "subjective complaints"; that the symptoms were not organic in nature and were purely mental. He stated that if the man had had a heat stroke it may cause mental deterioration, but in his opinion he did not experience a "heat stroke."

Dr. Garrison, who was the petitioner's attending physician, diagnosed the petitioner's trouble as heat stroke and stated that in his opinion petitioner was disabled by reason thereof; that the full extent of disability might not be determined for several years; that when he saw the man July 26, 1943, he was in a state of collapse; that if petitioner again gets overheated, he may go into a collapse and die; and, that in his opinion the man ha dpermanent partial disability resulting from the accident. It is to be noted that Dr. Garrison at the time of the rehearing had changed his opinion with reference to the condition of petitioner from the opinion that he had entertained at the time in January when he signed the report as one of the three consultants to the effect that on January 14th he found no evidence of objective pathology attributable to the accident.

The burden of proof was upon the petitioner to establish to the satisfaction of the triers of



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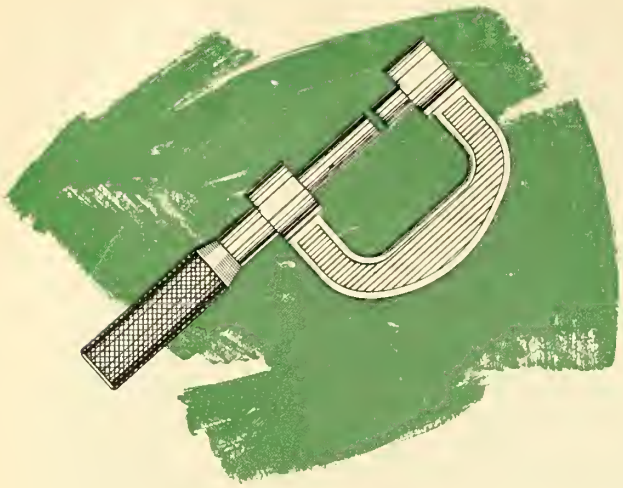
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fact by a reasonable preponderance of the evidence that the so-called heat stroke left a residual permanent disability. Johnson vs. Ind. Com. (1929), 35 Ariz. 19, 274 Pac. 161; Davis vs. Ind. Com. (1935), 46 Ariz. 169, 49 Pac. (2d) 384. In determining whether this burden has been met, the Commission, as triers of fact, is subject to the same rules of law as to the credibility of witnesses and the weight to be given to their testimony as a court or jury in a civil action. Davis vs. Ind. Com., supra.

Three of the doctors testified positively that in their opinion the petitioner had not suffered a heat stroke on th eday in question. Another doctor testified contra. Four of the doctors testified that in their opinion there was no residuary partial total disabiliey. Two of them suggested that he was suffering a psychosis in the nature of an anxiety neurosis induced by the accident alone and not by an injury. Another physician suggested that his apparent nervonsness might be attribntable to smoking three packages of cigarettes a day.

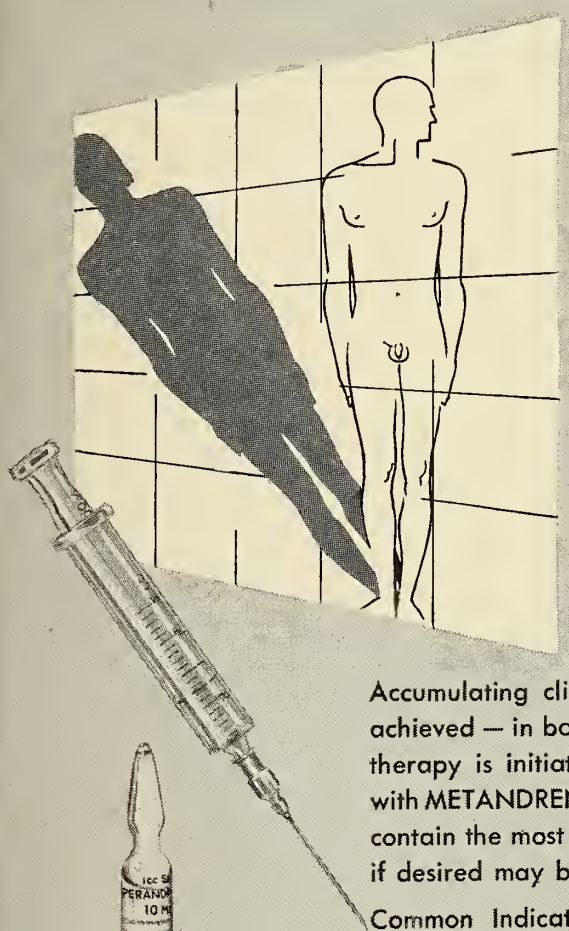
Counsel for petitioner earnestly insists that the conclusion of the Commission demonstrates that it gave no consideration to the "uncontradicted" testimony of the petitioner—his wife—and Mr. Shobe, all lay witnesses. The record conclusively shows that the doctors all considered petitioner's subjective complaints—they admitted that the petitioner, in their opinion, was honestly concerned over his condiion and the sensations which he stated that he experienced. The doctors all were of the opinion that a heat stroke may cause mental deterioration, but at least four of them were of the positive opinion that petitioner had not sustained a heat stroke in the medical contemplation of the condition labelled "heat stroke", and concluded that petitioner would not suffer the dire and severe consequences that most generally follow heat stroke.

The triers of the facts may well have concluded that petitioner's concern and nervousness were neurotic and not traceable to any injury sustained by accident arising out of and in the course of the employment. The finding of the Commission was that the claimed bisability was "not proximately the result of any personal injury sustained by accident * * *".

We have heretofore recognized that psychosis is a compensable disease; but before psychosis as a disease can be determined to be com-

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pensable, it must have had its origin in injury. A. S. & R. Co. v. Ind. Com (1942), 59 Ariz. 87, 123 Pac. (2d) 163. The pattern cut in the case of Phelps Dodge Corp. v. Ind. Com. and Frank Eads (1935), 46 Ariz. 162, 49 Pac. (2d) 391, fits the factual situation in the instant case relative to petitioner's subjective complaints, and we quote approvingly therefrom:

> "While the commission in its findings did not so state, the only conclusion to be drawn therefrom is that the commission believed respondent's neurosis was not induced by any personal injury he suffered but by a deep-set fear or apprehension of imaginary ailments that might follow as a result of his injury and the deplorable condition in which his family might be left. There was medical testimony to sustain such a conclusion. Whether this be a correct conclusion or not, it is not necessary to determine. There being no finding that the respondent's neurosis was the result of an injury, he must necessariyl fail, as our statute makes that indispensably necessary to entitle him to compensation for disease."

We conclude that there was substantial and competent evidence to sustain the finding of the Commission. We conclude further that petitioner did not carry the burden of reasonably establishing that the so-called heat stroke left any residual permanent disability.

The award is affirmed.

ARTHUR T. LaPRADE,
Judge.

CONCURRING:

HENRY D. ROSS,
Chief Justice.

Stanford, J. (Dissenting):

There is evidence given by physicians for the Industrial Commission that Smith cannot return to his work as a structural iron worker, which work he has been carrying on for eighteen years.

Dr. A. M. Tuthill said in his testimony that "I don't know what is the matter with him." And again he stated:

> "THE REFEREE: Under the facts in this case, would you recommend this man to go back to work and perform his duties as an iron worker in this climate?
>
> A. I would think not. If he has everything he has, he is a man to stay on the ground, and I have no doubt he has the nervous symptoms he complains of, because he seems perfectly honest about it."

Dr. H. J. McKeown, also called by the Industrial Commission, testified:

> "Q. And do you have any explanation,



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can you offer any explanation as to the cause of the subjective symptoms he related to you if it wasn't heat stroke or heat exhaustion?

A. I couldn't give you a cause for his present trouble at the present time, other than some neurosis.

Q. What was that neurosis caused by, if you know?

A. Well, he could have a fear of quitting his former occupation, just thinking about it.

Q. Wouldn't that have a lasting effect, that fear? Wouldn't that have a lasting effect?

A. It might for a few years, until he proved to himself that he was better than he thought he was.

Q. It would have to be something he would have to overcome, if he could?

A. Yes, this neurosis.

Q. And would you say that would handicap him in any line of work he performed, or might subject him to a recurrence of what has been recited here?

A. Well, it wouldn't be safe for him to be working high off the ground in structural steel work."

Under the power of the Industrial Commission they could let this man go with or without compensation and hold the matter under their control until they knew definitely what he could do. If it is a fact that a man of his training, because of this work and the injury caused thereby, has to be reduced to a job on the ground that would pay him but a meager wage, then his case should be kept under the control of the Industrial Commission until such time as they could determine definitely what his rights should be.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60



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Book Reviews

"HAYFEVER PLANTS", By Roger P. Wodehouse, Ph. D. 1945, Waltham, Mass., The Chronnica Botanica Co.; San Francisco, J. W. Stacey Inc., 245 pages; illustrated; price, $4.75.

The author, a veteran botanist long associated with physicans, attempts "to interpret the botanical facts of hayfever in terms of their clinical signifiances". Starting with the justifiable assumption that most of us have forgotten the most of such botany as we ever knew, he devotes his first chapter to a crisply written review that brings back the relatively few details of that science that are essential to the understanding of airborne pollens and of the plants that release them. In this, as in the chapters that follow, he writes plain English and avoids so far as possible the involved technical language of the laboratory botanist.

He then takes up the natural order the hayfever plants, known or suspected, of North America. Each species is recognizably described, and the more important are illustrated. The pollen production of each is roughly evaluated, and there are excellant sketches of the pollen grains, this being the author's specialty.

The book ends with a series of regional surveys, the region being determined by the distribution of the offending plants. The purpose is to show what pollinates where, when and how much. This publication will help the allergist to answer the awkward question: "Doctor, will I have hay fever or asthma if I go to such-and-such a place?" Even so, the answer should be qualified. For example, Arizona, with New Mexico and western Texas, make up the region called the Southwest. The wide variations in altitude, moisture, and cultivation make the chart only approximate for any given place in this region. Accurate knowledge of local conditions is necessary for successful pollen therapy, and such information must be timely, up to the season. The shift of population the increase in cultivated areas, and the unpredictable variations in the climate of the Southwest continues to alter the pollen picture, and the more recent changes have not been reported. It might be a good idea to require all workers in pollen allergy to bring their material up to date at intervals of about five years, either confirming their earlier reports or else declaring all previous publications on pollen incidence, as in a last will and testament, to be null and void.

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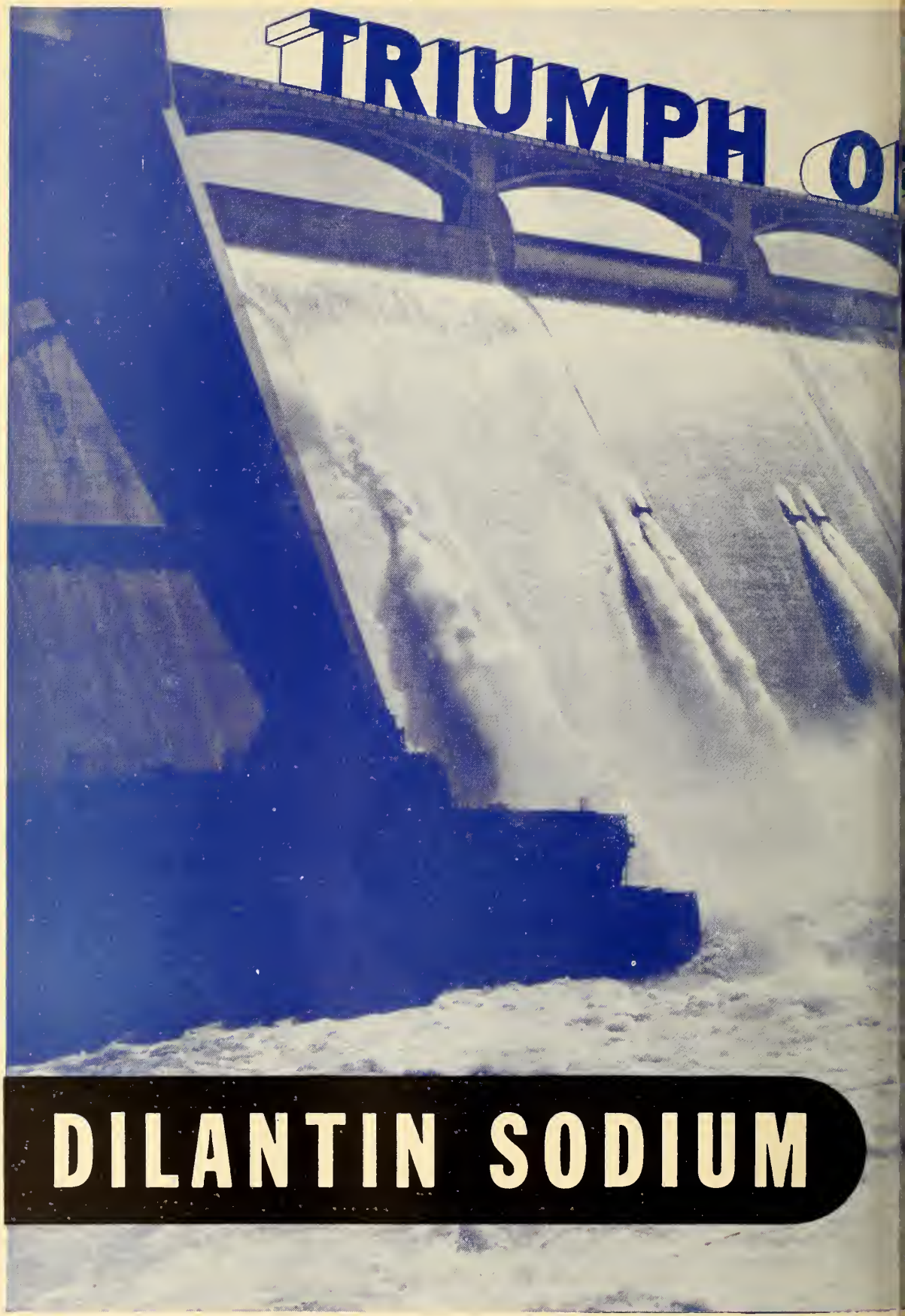
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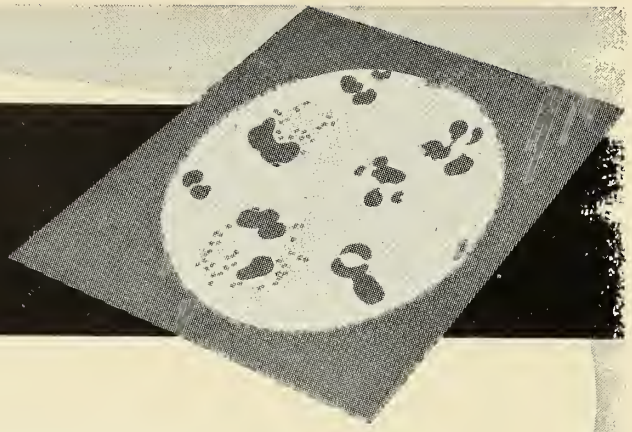
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Frisch, A. W.; Behr, B.; Edwards, R. B., and Edwards, M. W., Am. J. Syph., Gonor., & Ven. Dis. 28:527 (Sept.) 1944.

From a study of 109 patients, the conclusion is drawn that penicillin effectively eradicates chemoresistant gonorrhea in the female.

Greenblatt, R. B., and Street, A. R., J. A. M. A. 126:161 (Sept. 16) 1944.

At a U. S. Naval Hospital, 200 cases of sulfonamide-resistant gonorrhea treated with penicillin, showed no toxic reactions; all returned to duty in one-third of the time previously required.

Scarcello, N. S., New England J. Med. 231:609 (Nov. 2) 1944.

"In the Technical Bulletin of Medicine, No. 26, recently issued by the War Department, penicillin is stated to be the drug choice in the treatment of gonorrhea."

J. A. M. A. 126:575 (Oct. 28) 1944.

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Wigh, R., and Geer, G. I. Jr., J. Maine M. A. 35:207 (Nov.) 1944.

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Barringer, E. D.; Strauss, H., and Horowitz, E. A., N. Y. State J. Med. 45:52 (Jan. 1) 1944.

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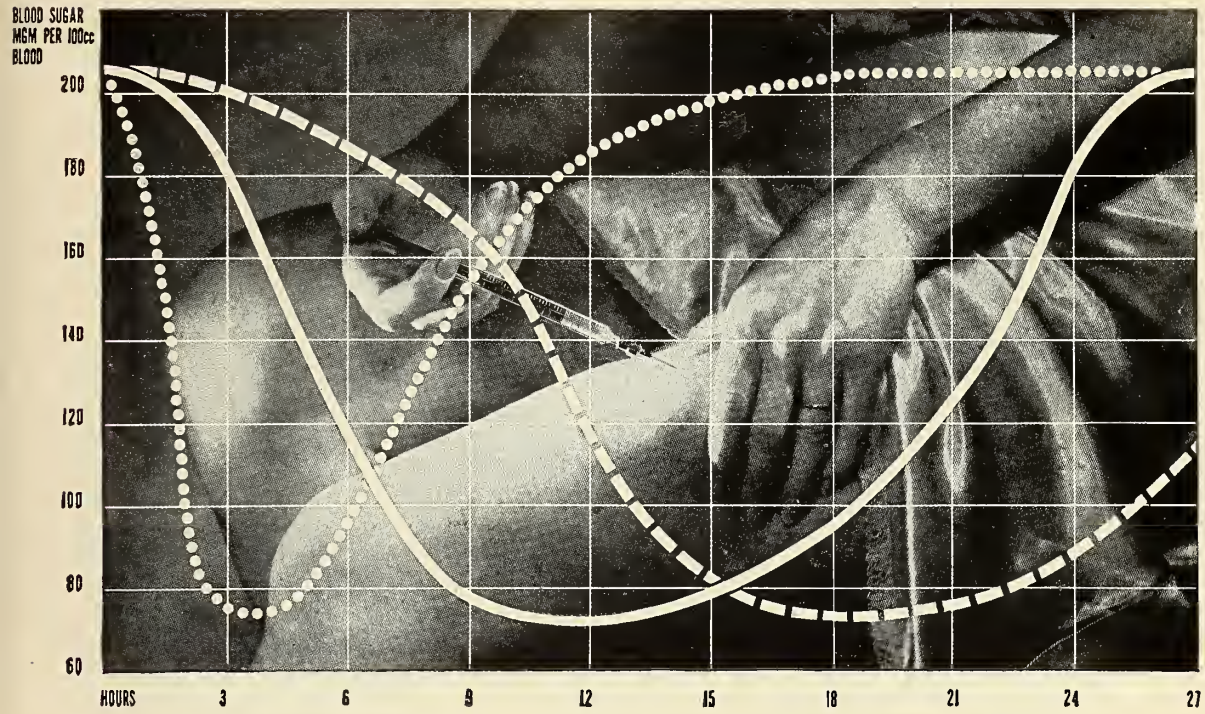
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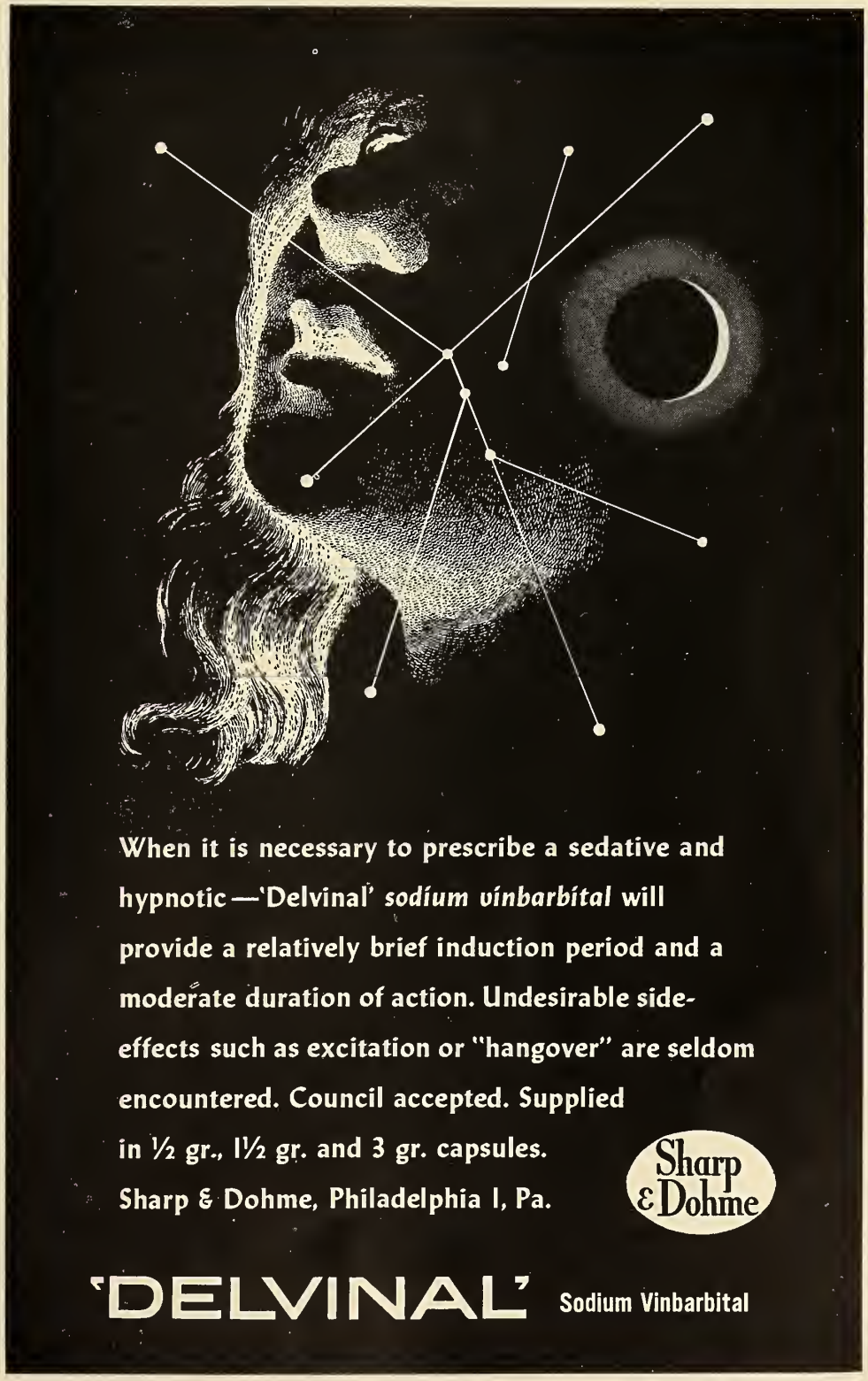
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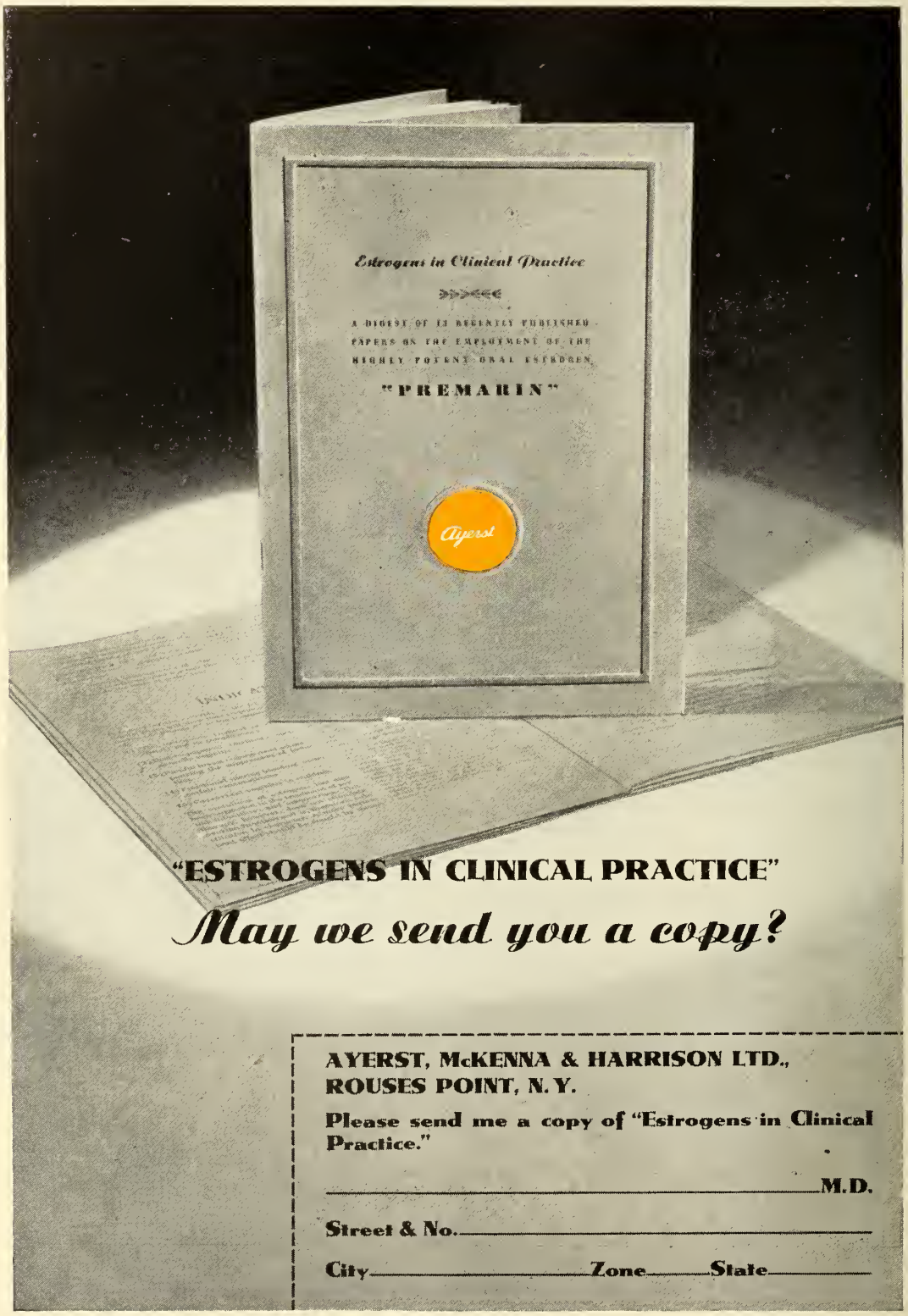
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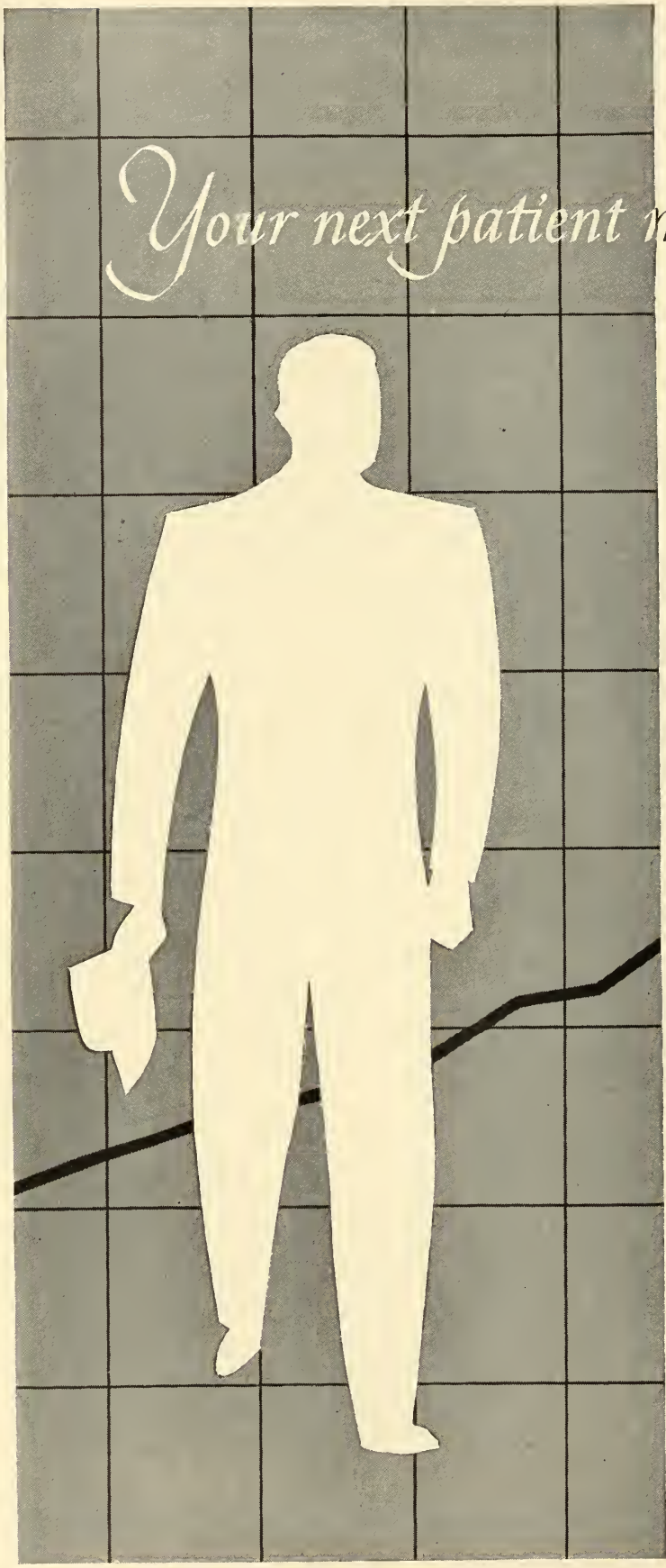


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*Blotner, H., and Hyde, R. W.: New England J. Med., 229:885, 1943.

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VIRGINAL HYPERTROPHY OF THE BREAST

KARL S. HARRIS, M. D. F. A. C. S.
and
MAURICE ROSENTHAL, M. D.
Phoenix, Arizona

VIRGINAL hypertrophy, a functional aberration of normal breast development, is not a common disorder but does occur with sufficient frequency to warrant its recognition. The growth of the breast accompanying the development of secondary sexual characteristics is supposedly controlled by hormonal stimulation or a shift in the hormonal balance, the pituitary and the ovarian hormones being chiefly concerned. Other functional changes, namely, the change involved in the menstrual cycle and the mobilization for lactation, are also brought about by hormonal stimulation or by a shift in the hormonal balance. The mass of the ordinary breast is largely composed of fat and supporting fibrous tissue for which the internal secretions of the anterior pituitary are responsible. The development of the ducts and the proliferation of the periductal connective tissues is induced estrogenic stimulation.

In the female, a hormonal imbalance or continued stimulation by estrogenic substance may lead to an overgrowth of the breast, the condition known as virginal hypertrophy. There are undoubtedly all gradations of the condition, but in the extreme instances it forms one of the curiosities of growth. The size may not only be a source of embarrassment, but may be of such magnitude as to be an actual physical handicap. These patients have poor posture, round shoulders, and various complaints due to the excess weight of the breast. Growth of the breast takes place most rapidly during puberty or pregnancy and is usually bilateral. When unilateral enlargement is noted lipoma or fibroadenoma of the breast must be suspected.

Virginal hypertrophy is a benign condition but patients having the disorder frequently demand treatment, not only for cosmetic reasons but because the size and weight are such a physical impairment. With minor degrees of virginal hypertrophy hormonal therapy may be of some value, but when the condition is marked usually some type of plastic surgery is required. Ideally the nipple and areola may be transplanted, and the hypertrophied breast tissue excised leaving as much fat as possible to simulate the breast. An excellent technique for reconstruction of breast has been described by Edward S. Lamond.[1]

The pathologic change of virginal hypertrophy consists of marked increase in the periductal and interlobular connective tissue. The mammary ducts frequently are increased in size and in number, and are commonly surrounded by varying numbers of lymphocytes. The lining epithelial cells may show hyperplasia and hypertrophy of the cells. In some cases, there is a marked preponderance of the fibrous tissue which may show hyaline degeneration; this sclerotic process may compress some of the ducts with resulting atrophy of some of the smaller branches. Occasionally, where there is a rapid proliferation of fibrous tissue, the dilated ducts are invaginated and villus processes are found within the ducts. This histologic picture resembles intra-canalicular fibroadenoma. In some sections, lobule formations may be a prominent feature. Diffuse virginal hypertrophy may be associated with multiple fibroadenoma, as demonstrated by the case to



Figure 1



Figure 2

be presented. In rare instances, malignant changes may occur, or the dilated ducts may become secondarily infected with the development of multiple abscesses throughout the breasts. Atrophy, ulceration and necrosis of the stretched, overlying skin is not an infrequent complication.

The case to be described is that of a 15-year-old colored girl with virginal hyperplasia developing at puberty. The condition had been allowed to advance to a marked degree probably due to family conditions.

CASE HISTORY

PAST HISTORY: A 15-year-old, unmarried, colored, school girl had always had excellent health. Development had been normal. Menses began at the age of 12, were regular with a 28-day cycle lasting 3 to 5 days, non-painful and requiring 2 to 3 pads per day. At the onset of menses patient had noted an enlargement of both breasts. The enlargement, however, continued to progress until the size of the breast far exceeded any of her girl associates. The girl's mother was dead, she lived with her father and was sensitive and shy because of the size of her breasts. For this reason she confided in no one and attempted to make them less noticeable by making a tight fitting muslin jacket. She asked her father to take her to a physician only when the right breast became ulcerated and began to drain.

EXAMINATION: The patient was a well developed, well nourished, young, colored female. She measured 60 inches in height and weighed 120 pounds. Physical examination was essentially normal except for poor posture, round shoulders, and breasts which were markedly enlarged and pendulous (Fig. 1 & 2). The breasts were composed of nodules of firm tissue about the size of golf balls, discrete, non-tender with no fixation to skin or chest wall. The nipples were not retracted although the right nipple was weeping with adjacent ulceration. There were numerous dilated veins throughout both breasts. There were enlarged axillary lymph nodes.

LABORATORY DATA: The Wasserman test was negative. Hemoglobin was 84%; Red blood count 4,790,000; white blood count 8,200, with differential blood count within normal limits. Urine examination showed no abnormality.

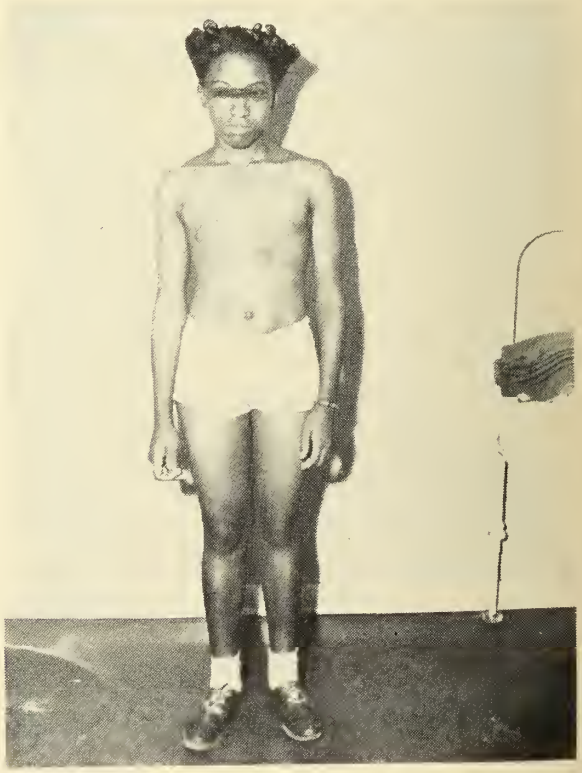


Figure 3

TREATMENT: The ulceration about the right nipple and areola precluded any plastic procedure on the right breast with preservation of the nipple, and limited finances made it mandatory that her hospitalization be kept at a minimum. A bilateral simple mastectomy was decided to be the treatment of choice. This was carried out as a one-stage procedure. (Fig. 3). Her postoperative course was uneventful and the wounds healed by primary intention.

MACROSCOPIC EXAMINATION: The specimen consists of two massive breasts (Fig. 4-5). The largest breast presented an ulcerated area of the skin, near the nipple which measured 5 cms. in diameter. The remaining skin surface showed no gross change of pathological significance. When multiple cross sections of both breasts were made, numerous light greyish-white, firm nodules which projected above the cut surface were found. These varied considerably in size and measured from 1 to 6 cms. in diameter. The intervening tissue was fibrous in character, but edematous and moderately soft in consistency. No large areas of cystic degeneration, nor hemorrhages were found.

MICROSCOPIC EXAMINATION: Sections through the breast tissue showed a proliferation of the fibrous and epithelial elements. In some sections, there was a preponderance and rapid growth of the fibrous tissue over the epithelial elements. In these areas, the ducts were increased in size and in number. Small lobule formations of gland acini were also seen. The dilated ducts were invaginated by the rapidly encroaching fibroblastic tissue, and the histologic appearance was that of an intracanalicular fibroadenoma. In some areas, there was a moderate hyperplasia of the lining epithelium with desquamation and degeneration of some of the cells. There was also marked edema with a moderate number of lymphocytes and plasma cells infiltrating the periductal and perilobular fibrous tissue. Areas were also found in which there was hyaline degeneration of the fibrous tissue

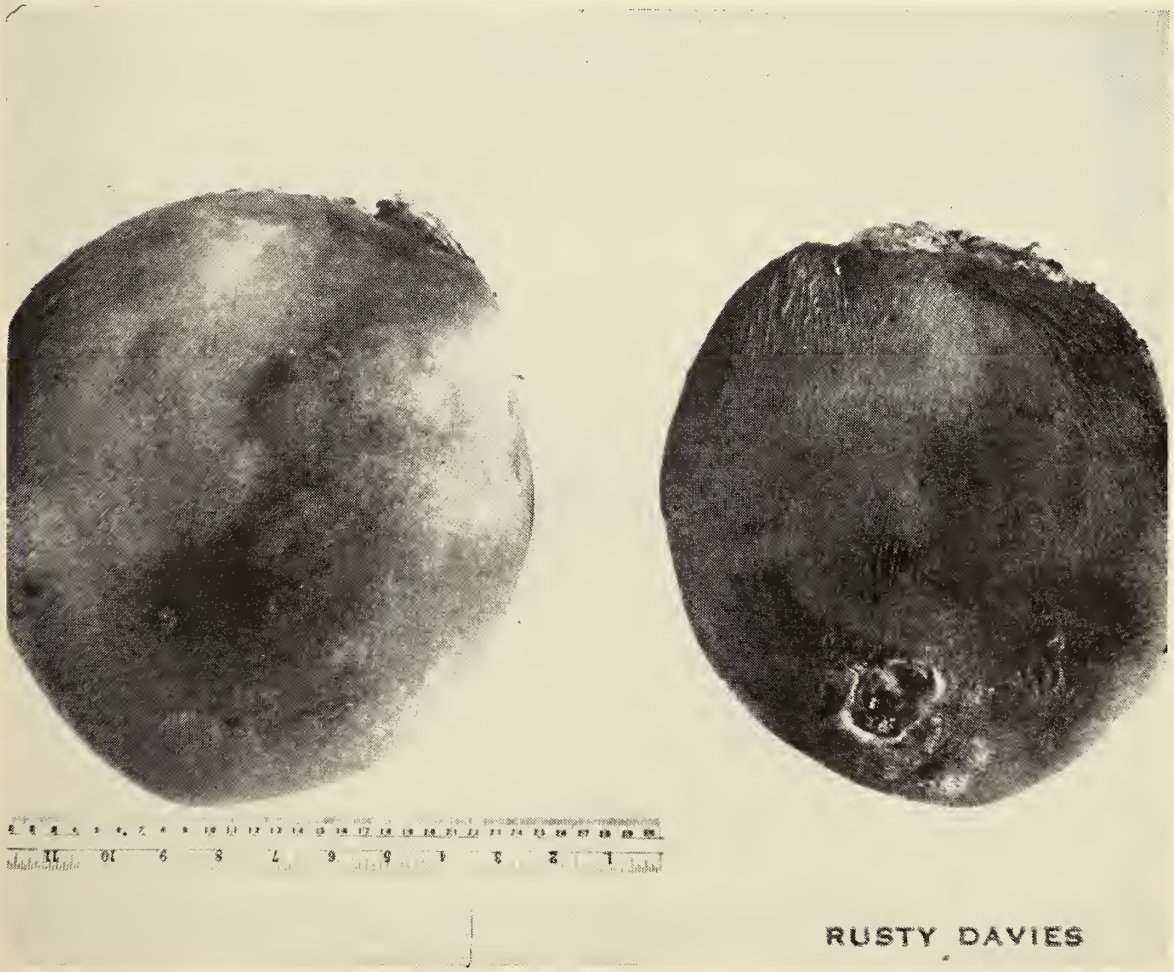


Figure 4



Figure 5

resulting in construction of the dilated ducts. Sections through the ulcerated area of the skin revealed that the epithelial surface had been denuded and the corium and subcutaneous tissue was infiltrated by lymphocytes, plasma cells and many polys. In some sections, there was atrophy of the epidermis. There was no evidence of malignancy found in any of the sections studied. Diagnosis: Virginal hypertrophy of the breasts with multiple fibroadenomata.

DISCUSSION

Virginal hypertrophy of the breast is a functional aberration in breast development as is gynecomastia in the male and is due to an abnormal hormonal stimulation or imbalance. The case reported here is an example, but it could not be ideally treated because of the ulceration present.

BIBLIOGRAPHY

1 Lamont, E. S. Surgery 17:379, 1945.

THE MANAGEMENT OF THE CLEFT LIP

J. M. OVENS, M. D.
Phoenix, Arizona

HAIR lip, or more properly called cleft lip, is a condition caused by failure of union of two or more parts of the face before the tenth week of fetal life. Cleft lip occurs in approximately one in 2000 births. The cleft may be unilateral of bilateral. Unilateral cleft on the left side is the most frequent variety.

ETIOLOGY

The cause of cleft lip is unknown. Many factors are given however and they may be briefly listed as follows:

A. Predisposing Causes.

1. Heredity—very frequently close or distant relatives of a patient with cleft of lip or palate

or lesions which are at first unnoticed, such as will have easily demonstrable similar lesions a small notching in the lip, a small notching in one side of the mouth with a tendency toward macrostomia or a minutely bifid uvula. Not infrequently the parents are affected or a brother or sister has the same condition.

2. Sex—the lesions are found 50% more frequently in males than in females.

3. Lack of proper nutrition—lack of proper nutrition during the early days of fetal development is also listed as a cause. This, however, has no scientific background. The effect of hyperemesis gravidarum on the nourishment of the fetus is unknown.

4. Different mechanical thoories—different mechanical theories have been advanced for failure of the cleft to close. Some of these can be mentioned as extreme flexure of the head, pressure of the tongue and mandibular processes on the early developing parts.

5. Prenatal maternal impressions—prenatal impressions have been mentioned as a cause but are most probably without foundation.

B. Actual Cause.

The actual cause of cleft lip is a failure of union of the globular process with the prolabium and the lateral nasal processes. The union normally occurs about the sixth week of development. By the eighth week development is normally completed and the lip has fused. It is not until the tenth or twelfth week that the palate has fused, however. It is believed that the parts are always present at birth and only by failure of their union does cleft of the palate result. None of the necessary parts are ever found absent. It is for this reason that repair can be done.

WHEN TO OPERATE?

There are several different opinions concerning the best time to operate for closure of the cleft of the lip or palate. It is my contention that a cleft of the lip and nostril should be closed as soon after birth as possible. This will also include alveolar clefts of the hard palate. Suffice it to say for the present that clefts of the hard and soft palate are closed at a later date. It is best to wait until ten to fourteen days after the baby has been born and has regained its initial weight loss to proceed with surgery. Many of these babies will prove difficult to feed, and the matter of regaining their original weight loss may be quite lengthy unless great care is taken in feeding the baby. Feeding problems are all too frequent these days.

Figure I represents a robust, healthy baby approximately three months after operation for closure of a cleft of the lip and nostril. This baby was so robust that it was operated upon about three days after birth. It developed into quite a feeding problem and lost considerable weight before it was finally on the upgrade with special formula prescribed by its pediatrician. By waiting until the baby has regained its original birth weight, one does not run such a risk. The reason for closing the alveolar process of the palate with the lip and nostril at the first stage of the operation is because later on the alveolar process becomes calcified, and it is much more difficult to fracture this down into position. When done within the first few weeks of life with the lip and nostril still cartilaginous it can be reduced with digital pressure and maintained there by the pressure of the corrected lip and nostril.

Figure II represents a complete cleft of the lip and nostril with a cleft of the alveolar process of the palate only. There is here quite a degree of upward and outward rotation of the pre-maxilla (note arrow in the photograph). At operation approximately fourteen days after birth digital pressure was all that was necessary to bring the pre-maxilla into position. After this the corrupted lip and nostril held the alveolar process correctly.

Figure III (a) represents a child, aged nine months, who was born with an incomplete cleft of the lip and complete cleft of the hard and soft palate. At the age of two weeks the baby was operated on and an attempt made to close both the hard and soft palate. The wound sloughed and according to the mother's words, "the hole in the top of the palate was a lot larger after operation than before operation." I first saw the child at the age of seven months. Note in figure III (a) the central incision on the left has erupted at a ninety degree angle, facing toward the left. At operation the lip, nostril and alveolar cleft of the palate were corrected. Correction of this is much more difficult because of the calcification that has taken part in the pre-maxilla. This child will need a secondary cosmetic repair of the lip and nostril at a later date. Figure III (b) represents the post operative condition.



Fig 1



Fig 2



Fig 3a



Fig 3b



Fig 4a



Fig 4b

ANESTHESIA

We prefer pre-medication consisting of four cubic centimeters of Elixir of Phenobarbital and use no atropine pre-operatively. The patient is induced with either drip anesthesia, and shortly before the commencement of the operation, this is changed to blow ether vapor. The surgeon sits at the head of the table and the patient is tilted with the head down at an angle of approximately thirty-five degrees. We prefer to keep the baby very light and do not mind a slight amount of motion at certain times during the operation. The patient should be absolutely motionless at other times however.

TECHNIQUE OF OPERATION

We have no standard technique for repair of these congenital deformities and believe that one technique may be superior in one instance where another may be much better in a second case. However, in most of these repairs, we do use a personal modification of the Blair-Mirauet technique. The primary principle is to obtain symmetry of the nostrils on both sides. The lip can usually be brought into position after this is obtained; however, the opposite is not true. Complete mobilization of both lips, the ala nasae, and the columella is necessary to obtain this. When operation is carried out at the correct time, the premaxilla can be reduced to normal position with digital pressure. The edges of the cleft lip are pared, according to the technique to be used, and the structures approximated anatomically, care being taken to advance the lip far enough anteriorly to obtain a full upper lip.

Figure IV (a) and (b) show the preoperative condition and post operative condition of a child aged ten days, suffering from a complete uni-lateral cleft of the lip, hard and soft palate. Digital pressure was all that was needed to restore the extremely rotated pre-maxilla to normal position where it was retained by labial pressure. The nostrils are bilaterally symmetrical and a good cosmetic result has been obtained. Figure IV (b) represents the shild's condition two weeks following IV (a).

Figure V (a) represents an infant aged four months in which the cleft of the lip unilateral and incomplete and the rotation of the premaxilla is not so extreme as that in IV (a). However, repair was much more difficult and a wire suture above the permanent teeth buds was necessary to retain the pre-maxilla in position. Figure V (b) shows this same child two weeks post-operatively.

Figure VI (a) and (b) show the pre and post operative results obtained with a baby aged five months operated upon for complete cleft of the lip and alveolar portion only of the hard palate. One will note that the scar here taken in the picture VI (b) taken two weeks post operatively is much more prominent than in the next picture VII (b) which was taken two weeks after VII (a). In figure VI chromic 00000 was used to approximate the deeper structures, and the skin as well, with resultant small areas of inflammation surrodnding ealh catgut suture. In VII (a) and (b) there was no such occurrence. Note that the scar in VII (b) is hardly discernible while that in VI (b) is very marked.

Figure VIII (b) represents the post operative condition of the same baby as in VIII (a). This patient had an incomplete cleft of the lip. Here 00000 black silk was used. The sutures were removed in forty-eight hours. There are no stitch marks present.

POST-OPERATIVE CARE

Immediately after operation a Logan bow is applied and post-operatively the baby is given a subcutaneous infusion of 250 cubic centimeters of isotonic saline or distilled water. The baby is kept in Trendelenburg position until it has completely regained conciousness. Water is given by mouth the first day and following that the regular formula is given. Providing there is no defect in the palate which will need repair later on, the baby is allowed to feed from a bottle as if no operation had been done. When, however, there is present a defect in the palate which will necessitate closure later on the baby is fed accordingly. The Logan Bow is kept in position for five days. During this time the wound is cleansed as often as is necessary with hydrogen peroxide solution, sulfa nilamide powder is blown over the area, and a mixture of balsam of peru, one part, and castor oil, four parts, is applied to prevent firm crusts from forming. Arm restraints are kept in position until the wound is healed.

SUMMARY

1. The development of the nose, lip, cheek, and, palate normally occurs before the sixteenth week of development.



Fig 5a



Fig 5b



Fig 6a



Fig 6b



Fig 7a



Fig 7b





2. The opportune time for operation upon clefts of the lip and alveolar portion of the palate is after the baby has regained its original weight loss or approximately ten to fifteen days after the baby is born.

3. Reconstruction of the nostril should take precedent over reconstruction of the lip in the repair of these conditions, as when the nostrils are correctly reconstructed, the lip symmetry will follow but not vice versa.

4. Black silk is superior to fine catgut for the repair of these conditions.

5. The wound should be scrupulously cared for afterwards and the arms fully restrained.

NOTE:
Abstract of paper read at Good Samaritan Staff Meeting, July 23, 1944.

FRACTURE THERAPY IN THE COMMUNITY HOSPITAL STRESSING THE LIMITED NEED FOR OPEN REDUCTION.

H. A. BARNES, M. D., M. S. c.*
Lt. Cdr. M. C. (V) (S) USNR

IN the past few years there has been a healthy revival of interest in traumatotheraphy, with improved methods of fracture treatment being constantly evolved through the efforts of interested surgeons and the fracture committee of the American College of Surgeons. With the trauma of war and present day industrial accidents, numerous new problems are presented with reference to the transportation of the injured, the treatment of shock and hemorrhage and the reduction of fractures and their care.

Accidents caused by high speed automotive travel, industrial hazards and global warfare have resulted in a healthy interest in fracture problems. The management and treatment of fractures today, as in the post ,requires the soundest judgment in *diagnosis*, *treatment*, and *after care* and should be treated by men who have general surgical experience with practical aptitudes, and a state of mind willing to cope with the numerous problems as they arise from the period of early treatment of shock, fixation of the fracture, and the subsequent restoration of the patient to gainful occupation.

Not everyone is endowed with the necessary mechanical ingenuity required for skillful fracture treatment, however, surgeons of diverse abilities are required to treat fractures. The severe multiple extremity fractures of modern day travel and global warfare do not always occur near metropolitan centers where numerous surgical and orthopedic attendants are available; hence, a dispersion of good fracture surgeons

* Formerly of Flagstaff, Arizona.

is everywhere a necessity. Too often this work is assigned to younger men, irrespective of their training, aptitude, or interest in traumatotherapy. Preferably there should be one in every group that conducts fracture work, who combines other branches of surgery to cope with muscles, nerves, and visceral injuries as they are encountered in severe fractures.

My own particular interest in the closed method of reduction of fractures was stimulated when a professor in a well-known medical school berated an overzealous operator, who reduced ninety per cent of his fractures by the open method. Surgeons generally, believe that early reduction with adequate immobilization-particularly the compounding of simple fractures to obtain better anatomical reposition of fragments—and in some instances only to satisfy the vanity of an impatient operator.

A recent survey conducted by the American Hospital Association, reveals that seventy-five per cent of the hospitals of the United States are less than one-hundred bed capacity. The small hospital stands as an institution eager to serve rich and poor alike in time of need, having little to do with creed and knowing no boundaries of nationality, as it pours its personality into the life of the community. Its successes attract little attention, but its failures are common gossip.

Statistics of Casualty Insurance Companies reveal that two-thirds of all major automobile accidents occur in rural sections, demonstrating that our high-speed machine age accounts for an increasing number of fractures in county hospitals—regardless of the professional capacity of the staff personnel or the hospital facilities to care for them. Many such victims are injured at great distances from their homes; hence, in emergencies they have little choice in the selection of their fracture surgeons. Thus, the responsibility for their treatment rests entirely upon the institution to which they are admitted and upon the physician personnel of the hospital.

The type of fracture encountered in industry, road accidents, and in war follows no set plan. As example, the fractured pelvis with a possible ruptured bladder, the compound fractured pelvis with a question of gas bacillus infection, and the fractured rib complicated with an increasing hemothorax—all call for expert training and judgment in clinical surgery.

The reasons set forth by William T. Hammond[7] for poor fracture treatment in small hospitals are as follows: (1) lack of interest—everyone with hospital privileges assuming the responsibility of treating all types of fractures, (2) the common belief that every doctor can set a broken bone, and (3) the fact that the responsibility of fracture work is often relegated to the youngest and most inexperienced staff member regardless of training, aptitude and interest.

An analysis of a group of cases in one of the larger hospitals in the United States revealed that a considerable number of patients admitted for open reduction, for onlay and inlay grafts, and for bone plating were referred from small hospitals where there was no one sufficiently qualified and experienced to attempt such operations. Evidently these cases had been treated by men who were not trained in fracture treatment, because the study of clinical histories and Roentgenograms indicated that proper early reduction and immobilization would have made *open* operation unnecessary in the majority of cases.

The exhibition of x-rays in court rooms before compensation boards together with periodic follow-up studies has shocked conscientious observers concerning the volume of poor fracture work in the smaller communities.

Through the Committee on Fractures, the American College of Surgeons has accomplished a great deal in improving the care of fractures in hospitals generally. By cooperative work with competent surgeons interested in fracture therapy, the College has obtained data revealing shortcomings in the general treatment of fractures and the necessity for the improvment of this treatment. After investigation and an analysis of information collected, a minimum standard for transportation and emergency treatment of fractures has been formulated with the detailed work of raising the standards relegated to regional fracture committee throughout the country for supervision.

THE AIM OF FRACTURE TREATMENT

In establishing the general principles of fracture treatment, the actual conditions at the site of fracture are of greatest importance. These may vary from a simple crack in the bone with no displacement and with the slightest

disturbance of surrounding tissue, to a lesion of the greatest severity with marked displacement of bony fragments, with considerable damage to all neighboring tissues. It may be necessary to make an immediate decision between amputation and conservative treatment, and in such a situation the surgeon must estimate the gross damage, and the question of blood supply to the injured parts. Such problems, if they occur where no consultant is available, are left to the judgment of the individual practitioner to be handled as his skill and his equipment may dictate.

THE CONSERVATIVE MANAGEMENT OF FRACTURES

While there are fundamentally innumerable approaches to the treatment of fractures, the philosophy of *reduction, rigid fixation, traction, immobilization,* and *open reduction* still hold in the order of their importance as listed.

From the functional viewpoint, the goal of treatment in traumatic lesions of bones and joints—as in other disabilities—is functional restoration in the shortest possible time. Rigidity and preservation of original anatomic form are obvious necessities to provide a mechanism for the action of muscles and joints. This, while an accepted statement of facts, is not all; the ability to function is very much dependent upon a healthy condition of muscles and joints with an intact and adequate circulation and nerve supply. Patients left with stiff joints and useless appendages find little consolation in x-ray perfection, and in the knowledge of perfect alinement for weight bearing, with poor healing. Muscle pulls must be used to advantage to prevent displacements and deformities in the repair process. Melvin Henderson states that the most unfortunate deformities take place in the ambulant patient.[8] That this is not always a truism is a fact illustrated by the users of the principle of fixation of fracture fragments with pins. Their incorporation in rigid plaster fixation allows early ambulation and decreases both the incidence of traumatic arthritis and the secondary degenerative immobilization changes in joint structures which usually require strenuous physiotherapy in later months, and often defeat the good accomplished by the original procedure. Deformity does not always mean dysfusion; deformity with function is preferable to perfect anatomic restoration with associated loss of earning power. *Function,* necessarily to the individual's gainful occupation, should be the goal in treatment.

CONSERVATIVE TREATMENT OF FRACTURES

Modern fracture treatment is rife with the invention of gadgets with a multiplicity of levers, screws, nuts, weights, and springs designed to fit fracture therapy into the present machine age. There is no argument that streamlining is needed for simpilicity's sake.

The Surgical Clinics of the Hospital of the University of Pennsylvania state the following facts with respect to closed reduction and the conservative management of fractures:

"That, (1) Their results are improving from year to year.

(2) There is an increase in the success of primary fluoroscopic closed reductions.

(3) Open reduction was necessary only in 7.3 per cent of their cases in 3 years.

(4) Metal internal fixation was necessary in only 18.3 per cent of cases."

If the better-staffed clinics (where many more fractures are treated than in the small hospitals) can limit themselves to such relatively low figures for open reduction with good results. it is desired that well-trained men in small communities can aspire to do the same—with fewer disastrous results.

In 1927, Scudder[11] prophesied the limited need for open reduction when he stated, "it must be borne in mind that the proper use of skeletal traction applied to the condyles of the femur, the tibial crest, the malleoli or the os calcis may diminish the necessity for the use of operative treatment by direct incision."

INDICATIONS FOR OPEN TREATMENT OF FRACTURES

Fractures usually come under three groups. (1) those never operated on, (2) those always operated on, and (3) those in which operation must be looked upon as of doubtful applicability. In the first group are Colles' fracture, clavicle fractures, and childhood and birth fractures. In the second group are listed patellar fractures with wide separation of bony fragments, some fractures of the head or neck of the radius, the radial shaft with displacement, certain spiral or oblique fractures of both bones of the leg in the middle or lower third, some fractures of th eolecranon, and fractures of the os calci

in which one line of fractures enters the astragalo-calcanial joint.

Scudder states that the following be implied: "That (1) The highest degree of safety to the patient should be maintained at all times.

(2) The surgeon and his associates are skilled in the use of the treatment.

(3) The surgeon possesses ability *greater* than that needed for the ordinary care legally required.

(4) The surgeon has available the necessary instruments and apparatus.

(5) The anesthesia be properly conducted and safe.

(6) The pre-and Post-operative care be adequate and supervised by the fracture surgeon.

(7) *Selection of treatment only after due deliberation, that other more conservative methods will fail.*"

These desiderata for open operation do not always exist in the hospital in every small community. In the small hospital more men are operating and reducing fractures because of the lesser staff restrictions placed upon their ability to treat fractures by the open method. In larger localities where more rigid staff restrictions are enforced, there are fewer open operations by the incapable.

Quoting Dr. E. S. Ellison[5]: "Open reduction may be frought with great danger of loss of function, limb, or even life. The promiscuous teaching of this method has brought sorrow to many in its application. This refinement in treatment should be resorted to *only* after much deliberation. If experience reveals that the fracture under consideration will heal with good function despite its displacement, let sleeping dogs lie and treat the fracture by the closed method."[5] Often the motive for open reduction is based upon the attainment of more perfect anatomical result without taking into consideration that absolute assurance of a perfect result is inperative when undertaking open reduction. This assurance must be based upon experience in fracture surgery, the bone or bones involved, the level of the fractures, the patient's age, and the age of the fracture.

CLOSED VERSUS OPEN REDUCTION

There is nothing new about the principles that should be observed by every surgeon who accepts the responsibility of converting a closed into an open fracture. Some of the principles as stressed by Herbert P. Galloway, M. D., consulting orthopedic surgeon to Winnipeg Hospital, are as follows:[6]

"1. If in doubt as to whether to try open or closed reduction, try closed methods first.

2. No surgeon should accept the responsibility of converting a closed into an open fracture unless he has sufficient ability and experience to utilize aseptic methods.

3. The surgical environment must be proper."

The work of Sir Arbuthnot Lane in popularizing bone plating has done more harm than good in some instances—not realizing at the time that a method of treatment can be more or less an obsession with its originator. To illustrate a case of "Lane plating" of a simple fracture of the tibia with two plates, are the remarks of an intern spoken to the gallery of visiting physicians in Lane's clinic: "I struggled for an hour and a half yesterday plating a T-fracture of the humerus." No less a person than Sir Robert Jones of Liverpool would have carefully reduced the fracture in a manipulative manner and secured a better functional if not anatomical end-result.

DANGER OF OPERATIVE TREATMENT OF FRACTURES

In the adoption of the operative treatment of a fracture, the surgeon should visualize potential dangers in order that they may be minimized or avoided. He does not need to operate on many fractures or view the work of others to become personally aware of these difficulties and dangers.[4]

Infection is the most common disaster associated with the open method. Bone is more susceptible to infection than any other tissue. Unusual precaution therefore, must be taken in spite of supplemental chemotherapy with sulfonomides and penicillin.

Hemorrhage is due more often to faulty approach than to imperfect vascular control. Most of the long bones can be reached by "dry routes". Many men are too indolent or perhaps uninformed to study the proper anatomical approach.

Vascular interference: Darrach[7] states that delayed or nonunion can and does result from operative interference with blood supply.

The most serious effect of vascular interference is the predisposition to infection.

Faulty material: The use of poorly tooled materials and low grades of alloys sometimes results in pieces being broken off in the wound.

Faulty technic: Careless examination of the patient and of x-ray evidence, unsound appreciation of what can and what cannot be accomplished, faulty approach, improper tools, clumsy procedure, rough handling of tissues, careless immobilization and after-care are far more often to blame than the method itself.

In larger well staffed clinics there has been a definate increase in the number of open reductions. In an annual fracture report submitted by Doctor Masey[10] of the Mayo Clinic (1938), there were 195 open operations and 181 closed reductions with practically no mortality (.2 per cent). This can be done by master technicians and a skilled fracture team. No doubt the introduction of non-electrolytic metals has been a factor. Where there is close cooperation of various services in group medical practice, better results from open reduction will ultimately eventuate.

There are various methods of treating fractures, each method has its advantages when properly applied. Multiple methods simply add to the elasticity of one's armamentarium. One should not be a faddist and try to treat a large percentage of his fractures in any one particular way—whether it be closed or open. Certain fractures are unquestionably better treated by open operation, and one should be able to recognize such fractures in the beginning and not leave operative treatment as a last resort in such cases.

There are fractures best treated by traction, others by splinting, and a very few by open reduction. Quoting W. C. Campbell[3]: "Approximately ninety-five percent of fractures may be reduced by conservative measures. The remainder require open reduction. Only because of the growing demand for better anatomic alinement has the number of fractures reduced by open operation been increased. The indiscriminate practice of open reduction is to be whole-heartedly condemned. Surgery should never be recommended unless definitely warranted."

Trials of radical departure should be left to the hospitals with the opportunity to see a large number of patients and, thereby, to make a reasonably prompt decision as to their value. Smaller clinics would do well to continue methods already generally approved, and not follow the lead of someone who has written an article in a medical journal.

Operation is indicated only when a satisfactory reduction cannot otherwise be effected or maintained as may be occasioned by (1) interposition of tissue between fragments, (2) displacement of fragments by reflex contraction of muscles, (3) constant motion from inability to fix the fragments firmly, or (4) failure of reduction by mechanical forces—as leverage, traction and pressure.[3]

The crux of the entire problem of fracture treatment is stated by Wilson[12] when he says, "by the creation of numerous paradoxes the method of obtaining one goal in fracture treatment is often the worst method of reaching the other." For the prevention of displacement during the healing process, immobilization is necessary but on the other hand, movement is essential for the maintenance of active circulation and a functioning muscle-articular apparatus. The individual surgeon must reconcile these conflicting interests, and by so doing, more perfect results will be obtained by the methods in which he is trained and most skilled."

CONCLUSIONS

1. The small community hospital can render effective and safe fracture therapy with a limited need for open reduction.

2. It is desirable that there be one in a group who conducts fracture work, who is also skilled in other branches of surgery necessary to care for the associated soft tissue, nerve and visceral injuries accompanying severe fractures. That this is a step in the right direction is demonstrated by the good results of group clinical efforts.

3. The majority of fractures can be managed by closed reduction the attainment of ultimate good functional results although not always perfect anatomical results.

BIBLIOGRAPHY

1. Bull. Am. Coll. Surgeons: Outline of treatment of Fractures. 1933, p. 5.

2. Bull. Am. Coll. Surgeons: (April, 1940, No. 2, p. 82. Organization and Management of Small Hospitals.

3. Campbell, W. C.: Operative Orthopedics, 1940, pp. 491.

4. Darrach, Williams, A.: Disaster Following Operative Treatment of Fractures, Ann. Surg., Vol. 90, pp. 595-602, 1929.

5. Eliason, E. S.: Conservative Treatment of Fractures, Surg., Gynec. & Obst., 68:549-553, (Feb. 15) 1939.

6 Galloway, Hubert P.: Open Versus Closed Reduction, Canad. M. A. J. 18:87-90 (May) 1930.

7. Hammond, William T.: J. A. M. A. 107:404-407 (Aug. 7) 1937. Treatment of Fractures in Rural Hospitals.

8. Henderson, Melvin: Interstate Post-Graduate Medical Assemblies of North America. Milwaukee Meeting, pp. 408-412.

9. Kennedy, R. H.: Our Responsibility to the Fracture Patient, Bull. Am. Coll. Surgeons, September 1936.

10. Macey, H. B.: Analysis of Fracture Service 1937-1938. Proceedings Staff Meeting Mayo Clinic, 15:15.

11. Scudder, Charles, T.: Indications for Operative Treatment of Fractures, J. A. M. A. 81:1917-1920, Dec. 3, 1927.

12. Wilson and Cochrane: Textbook of Fractures, pp. 1-6, 1936.

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H. A. Barnes

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Editorials

The Vulgarization of Science

Websters Dictionary of Synonyms gives for the word vulgar: common, ordinary, familiar, popular. A second choice, indicating a commonly accepted though less precise definition gives: coarse, gross obscene, ribald. The use of the term in the title of this comment implies both of these connotations is a sequence which the reader must choose for himself. We shall speak briefly of the effect of the vulgarizing influence of lay publicity upon scientific material heretofore more or less cloistered as (1) contraception; (2) artificial insemination; (3) abortion and sterilization; (4) the more esoteric angles of the psychology of sex. These few categories will exemplify a number of similar subjects—erst-while noli me tangere—now stark naked to the brazen stares of the multitudes.

Fool would be he who strove to bar to the eager mind any legitimate field of information. No doubt the trend toward the absolute exposures of present-day lay journalism reflects a healthy element of honest will to teach and to learn. Unfortunately, however, selfish considerations and the thirst for notoriety have sadly adulterated the worthy constituents of these trends. There is a morbid taint perceptible. The healthy appetite for knowledge is being badly fed and the public taste becomes more jaded with each monthly advent of the "*Readers Digest*"—each periodical appearance of De-Kruif and the doctor—panders to a morbid public taste.

In the June issue of this Journal, editorial comment concerning x-insemination or the so-called insemination of a wife by a foreign donor was discussed at some length. It was pointed out that the complete expose of this matter has in many instances worked a hardship upon a couple who have achieved a pregnancy by such means. The modus operandi is this: so many people have been exposed to a recitation of the virtues and technics of the procedure that any known childless couple who appears with an offspring becomes subject to the long finger of suspicion, Decent guardianship of matters of this sort with a restriction to the proper setting certainly seems vastly preferable to the maudlin, often inaccurate, exposes which kept the public mind titillated with such matters.

A case in point concerns the matter of so-called selective sterilization. Recently we were called upon by a representative of a national organization known as Birthright, Inc. This organization, on the basis of endowments, aids, fosters and abets the sterilization of socially inadequate persons. No doubt there is a crying need for the type of propaganda which this organization distributes in many communities. On the other hand, the activity of such an organization which proposes to vulgarize and disseminate the tenets of the sterilizationists may work serious harm in a community where such a procedure is already well and adequately handled. These are matters which should in good taste and proper execution be handled quietly and without fuss or feathers. Opposition to such procedures is seldom to be overcome by tracts, brochures or radio harangues. The dissemination of such platitudes is apt to constitute the waving of a red flag at a bull, and in such a case serious harm may be done to a worthy cause. Here again it may be stated that

complete vulgarization of the deep scientific truths which underlike such matters might be open to serious criticism on sound bases.

Elsewhere in this Journal appears a book review by Dr. Earl Engle of Paul DeKruif's recent windy effort—The Male Hormone (Harcourt, Brace & Co., New York.) This delightful and perceptive dissection of another one of DeKruif's pseudo-scientific best sellers expresses delightfully our own feelings in relation to this type of opportunistic medical literary frippery. DeKruif, by the way, appears as the perfect exponent of the vulgarization of medical knowledge. To put an end to this comment it may be pointed out that DeKruif's expressed intent may be to make medical knowledge "common, ordinary, familiar, popular." His actual effect, however, too often and too completely achieves the second choice definitions which are listed at the start of this editorial comment.

Editorial reprinted from July issue of the *Western Journal of Surgery, Obstetrics and Gynecology.*



Fred Covington Jordan (1883-1945)

Through the minds of many of us went the thought, "another casualty on the home front," when the startling news came to us of the sudden passing of Dr. Fred C. Jordan, on Sunday morning, July 29th. Although close friends knew that he was fighting a losing battle with cardiovascular disease, the end was not expected so quickly. The home front in Maricopa County has suffered greatly since Pearl Harbor and our confreres in service in distant areas will find several vacancies in the ranks, when they return to civilian practice. Dr. Jordan has been down several times during the past three or four years, but has always recovered and resumed his arduous practice in obstetrics and diseases of children. This time he was stricken while at home and while his wife was away from home trying to recuperate from serious illness of her own. Dr. Jordan died the next day, as he always declared he would like to pass, in active service.

He had a long and honorable career in his profession, practically all of which was spent in Maricopa County, Arizona. Born in Pleasantville, Ia., in 1883 he attended schools there and took his medical degree from Drake University College of Medicine, Des Moines, in 1908. His intern work was done at Cincinnati Lying-in-Hospital, with postgraduate work at Harvard University School of Medicine. He first located in Lewis, Iowa, where he was married in 1911 to Miss Berma Bland. In 1912 he moved to Arizona and located in Chandler where he engaged in general practice for the next fifteen years. In 1928, Dr. Jordan decided to move to Phoenix and devote himself to the practice of obstetrics, gynecology and pediatrics. He became one of the leading practitoners of Arizona in these specialties. He was active in medical organizations; never striving for office or personal advancement, he quietly and efficiently performed his duties, when called on. He was vice-president of the Maricopa County Medical Society in 1933, and later served on the Board of Censors and Library Committee. He was a charter member of the Phoenix Clinical Club which organized in 1929 and the solidarity of that organization was due in large measure to his efficient work as its secretary-treasurer, in which office he was continued from year to year until his death. He was on the active staff of all three general hospitals of Phoenix, serving on important committees. He was on the Executive Committee of St Joseph's Hospital for several years, and continued from year to year as chairman of the Obstetrical Committee of the Good Samaritan Hospital.

Dr. Jordan did not try to win recognition as a medical writer. He was faithful in attending society and staff meetings, and often presented case reports or praticipated in discussions, but these were seldom put in shape for publication. The same was true of his interesting and

carefully prepared diagonstic discussions before the Clinical Club. Record of only four papers published by him can be found, in his more than thirty years busy and fruitful practice in Arizona. These are:

Anesthesia in Obstetrics. Southwest. Med., April 1928.

Cerebrospinal Fever (with special reference to present epidemic). Southwest. Med., Sept., 1929.

Staphylococcic Infection in New Born Infant (case report). Southwest. Med., Jan., 1931.

Cesarian Section in Good Samaritan Hospital during 1930. Southwest. Med., Feb., 1931.

As in his medical work, so in his avocational activities, Dr. Jordan limited his attention to a few areas, but in these he showed the same abiding interest and excellence in achievement. For years he was one of the best known golfers in Arizona, winning the southwestern championship one year; this hobby his cardiac disability forced him to give up. He was a champion swimmer and noted for his underwater feats. As a member of the Phoenix Lions' Club he held the record of fifteen years unbroken attendance. Well known as a musician, he was a charter member of the Orpheus Club and of the Music Committee of the Phoenix Christian Church. For more than ten years he taught a church school class of middle age adults, first in the Central Christian Church and then in the Phoenix Christian Church.

Several times during the past four years, heart attacks gave warning of impending danger, but Dr. Jordan was not willing to give up his work, with two sons in the army and doctors so badly needed to maintain health and morale on the home front. So, with full knowledge of what it meant, but without fear, he met the summons with his boots on and, like any good soldier, doubtless thought, "this is it" when struck down while on duty. So passed another confrere and friend, one who could truthfully say, "I have fought a good fight, I have kept the faith." Family, friends, neighbors, patients, fellow citizens, in their sorrowing can justly feel pride in having known a whole hearted Christian gentleman, a faithful and skillful physician, a patriotic citizen, a real man, universally loved and respected.

Dr. Jordan is survived by his widow and two sons. Dr. F. C. Jordan, Jr. Captain in the U. S. Army Medical Corps, trained in the same specialties, will doubtless take over his father's practice when discharged; Corporal Wm. D. Jordan is with the U. S. Army in Panama. His mother and two sisters are still living in Des Moines, Ia.

W. W. W.

GENERAL KIRK REPORTS ON MALARIA

Fear due to lack of information can cause more harm than malaria itself. Major General Norman T. Kirk, Surgeon of the Army, declared in his first public report on the effects of this disease on the individual.

With the prospects of thousands of soldiers returning to this country from malarious regions, General Kirk made an appeal for a better understanding of the problem so the public will realize that, with a few simple precautions, malaria is not a disease that should give undue concern either to infested service men or to their families.

"The soldier who, through ignorance, worries about malaria and the chances of relapse," he said, "will suffer more ill consequences than the man who understands that with proper care this disease is not of serious import from the standpoint of the patient's general health. This very knowledge will contribute considerably to the individual's well-being and fitness."

General Kirk pointed out that families should not consider soldiers infected with malaria a menace to them or the community, provided the malaria sufferer is taking treatment or promptly obtains medical care when symptoms occur.

There are a number of types of malaria, but the two that concern American troops are benign tertian malaria, which is rarely a serious disease, and malignant tertian malaria, which without treatment may be fatal. The latter type is cured by atabrine so that it is not a problem when properly treated. The attacks of malaria which soldiers will suffer after return to this country will be due to benign tertian malaria. This is the one type which is of military signifiance to American troops.

The service man infected with benign tertian malaria can continue with his usual ardous combat duties as long as he takes the necessary small doses of atabrine. Benign malaria is rarely cured by atabrine. However, this drug suppresses the disease. When a man with benign malaria stops taking atabrine, the usual symptoms—chills, fever, headache, and nausea—may appear.

In the majority of cases the disease has run its course after a man has suffered a few re-

lapses, and no permanent danger has been done. Out of 1,000 cases, about one third will have only one attack. There will be about 40 out of 1,000 who will suffer ten relapses, and one in 1,000 will have as many as 20 attacks. Relapses become less acute as time goes on.

When attacks do occur, the symptoms are relieved and all progress of the disease is quickly suppressed if the proper medical care is given the patient. In most cases this can be accomplished within 48 hours, according to General Kirk.

"As a result of prompt and efficient action," he said, "attacks of malaria by themselves cause only brief incapacitation and result in no permanent danger to the body."

General Kirk stressed the point that malaria can be spread only by the anopheles mosquito. even if a man is infected, the anopheles mosquito cannot transmit the disease unless it has bitten the victim during a relapse and before medical treatment has been secured. In most parts of the United States there is little liklihood of this since mosquito control measures are adequate.

Infected individuals who are not taking regular suppressive medication are particularly subject to relapse if they engage in strenuous work, if they suffer from exposure, or if they indulge in drinking to excess.

One phase of malaria treatment that causes concern to many victims is the yellow color the skin takes on as a result of using atabrine. This color is not due to jaundice or any other malfunctioning of the body. It is caused directly by the yellow color of atabrine which is deposited in the skin. The yellowness will disappear a few weeks after the use of the drug is discontinued.

Deaths due to malaria since the beginning of the war have been rare. They are nearly always associated with other diseases and with circumstances which cause delayed or inadequate treatment, Army records show. In the early stages of the Pacific war, malaria did more damage to American soldiers than Jap bullets—in disabling troops, but not in killing them.

THE JOURNAL OF VENEREAL DISEASE INFORMATION

Clinical Action of Penicillin on the Uterus. Herbert M. Leavitt. The Journal of Venereal Disease Information, Washington, 26: 150-153 (July), 1945.

The possibility that penicillin may have effects on the uterus similar to, but less intense than, those of ergot, also a mold product, is suggested by a review of records of pregnant women treated with penicillin at the New Mexico Intensive Treatment Center.

Of 21 pregnant women treated for syphilis or gonorrhea with penicillin, 8 manifested symptoms of uterine activity—cramps or bleeding or both. Of the 8 patients showing uterine symptoms, 2 had complete abortions immediately following the use of penicillin.

Of the 8 cases in which symptoms occured, 7 were treated with the same lot of penicillin; 4 other pregnant patients treated with penicillin of the same lot manifested no unusual symptoms. Of 10 pregnant patients treated with penicillin made by 3 other manufactures, only one showed symptoms. This may suggest that the observed action on the uterus may have been due to an impurity and not to the penicillin itself. Another group of physicians previously had reported 2 cases of threatened abortion following penicillin therapy for syphilis in pregnant women; they interpreted the reaction as a form of therapeutic shock rather than as the result of specific action of penicillin.

Several medical officers in charge of various rapid treatment centers have commented informally on the effects of penicillin in inducing premature menstruation or in prolonging menstruation already started. Effects of penicillin on menstruation have been observed repeatedly at the New Mexico center. Some patients with a history of delayed menstruation promptly began to bleed soon after administration of penicillin. Others bled more profusely or for longer periods of time than normal, and some bled within a week after having completed previous menstruation. A rapid survey of the records of all mature female patients of menstrual age treated with penicillin at the New Mexico center showed that 17 of 206 patients menstruated during the 24-hour period immediately following beginning of penicillin therapy; this was more than twice the 7.4 who might be expected to menstruate during any given 24-hour period. In a control survey of 253 mature female patients of menstrual age treated by methods not including penicillin only 7 women menstruated during the first 24-hour period following the beginning of treatment.

"SULFA" IN WOUNDS DISCONTINUED

The Army's accumulated experience in wound management does not justify the local use of any chemical agent in a wound as an antibacterial agent, according to the Office of The Surgeon General. The local use of crystal line sulfonamide (sulfa powder) has therefore been discontinued except in the case of serous cavities where its use, while permissible under the direction of the surgeon, is not recommended. This subject is covered by War Department Circular No. 160 as amended by W. D. Circular No. 176, 1945.

HOSPITALS NOW—AND TOMORROW

A. C. BACHMEYER, M. D.
Director of Study
Commission on Hospital Care

Lack of incentive for young doctors to begin practicing in rural and semi-rural areas is one of the big problems which both the public and the medical groups are facing today. Large hospitals, medical centers and city practices attract many young physicians because of well-equipped laboratories, skilled technicians and opportunity for continued study.

In vast stretches of rural America there are no hospitals and the small number of physicians which serve those areas must work without the valuable equipment and assistance which a hospital affords.

The nation's postwar planning on local, state and national levels is working toward construction of hospitals to serve those neglected areas. But before any real planning can be done it is first necessary to know exactly what hospital facilities and services are available at the present time.

So last fall the Commission on Hospital Care was established through the efforts of the American Hospital Association and was given the job of taking the vital inventory of the nation's hospital facilities. The Commission on Hospital Care is located at 22 East Division Street, Chicago 10, Illinois.

It is an impartial, fact-finding body and its members are outstanding men and women of national repute who have a sincere interest in public welfare. They include members of the medical, dental and nursing professions; hospital trustees and administrators; public health; medical education; industry; labor; agriculture; public welfare and the fields of sociology and economics.

The work is financed by grants from the Commonwealth Fund, the W. K. Kellogg Foundation and the National Foundation for Infantile Paralysis.

The objectives of the Commission on Hospital Care are to take a census of the present hospital and public health facilities in the nation; appraise their capacity for service; establish standards for evaluating physical facilities, organization and management of hospitals; determine the over-all national need for additional facilities and service; formulate a national coordinated hospital plan and to suggest methods by which that plan can be realized.

National interest in the survey is widespread. Thirty-five states are in one phase or another of their studies. Surveys are in process or about to start in: Iowa, Massachusetts, Michigan, Minnesota, Missouri, North Dakota, New Hampshire and Wisconsin. Survey legislation has been enacted but surveys are not yet started in: Delaware, Indiana, Maine, North Carolina, New Mexico, Oklahoma, Oregon, Rhode Island, Virginia, Vermont and Washington. Survey legislation is pending in: California, Florida and South Carolina. Survey organizing committees have been established in: Illinois, Kansas, Kentucky, Louisiana, Montana, Nebraska, Ohio, Pennsylvania, Tennessee, Texas, and West Virginia. States which are proposing that the Post-War Planning Commission conduct the survey are: Alabama and New Jersey. States which have made preliminary hospital studies are: Georgia, Maryland and Utah.

The commission is conducting a pilot-study in Michigan. The inventory of Michigan's 700 hospitals, including nursing homes and other institutions for the care of the sick is now nearly completed. The method used in Michigan will serve as a pattern which other states may use in making their surveys if they so desire.

A detailed study of every hospital in the entire country would take more time and money than the Commission has at its disposal. Therefore, each state is being urged to carry on its own study. In this manner, local interest in the problem will be aroused. Each state will become immediately aware of its needs and a desire to furnish adequate hospital service will be stimulated. It is suggested that the survey be conducted by a single designated state agency in close cooperation with the state planning commission and the health department. Representatives of medical, dental and nursing professions, hospital administrators, labor, industry, agriculture, public health and welfare should be represented on each state study committee.

Although each state carries on its own study, The Commission on Hospital Care will act as a coordinating body and furnish a standard questionnaire for use by all states making the survey. Other work materials, as well as the aid of technical consultants, will be provided by the Commission. The final job of tabulating the information will be done by the Commission staff in the national office.

The hospital and the private physician are a team against sickness and disease. For a long time physicians and hospitals have worked together—and fought together—to preserve life and health. The technnological advances of medicine have made that teamwork more vital and more effective than ever before.

Now that the health spotlight has swung to the hospital, we are becoming increasingly aware that there are not enough hospitals to serve everyone who needs hospital care.

But the spotlight has also swung to planning. Before we build, we have to plan, so that every area—rich or poor—will have its share of the vital hospital facilities.

That is why the Commission on Hospital Care is directing this county-by-county survey of the nation's hospitals. In this way we can put a magnifying glass to the hospital problem in each area, yet retain a picture of the overall needs of the county, the state and the nation.

It is part of the Commission's undertaking to solve the problem of uneven distribution of hospitals and physicians. We know that doctors are not attracted to areas where there are no facilities. So we must be certain that the postwar hospitals are built in the right places. Each community can't just "up—and build a hospital" but must fit itself into the plans of its neighbors.

For all these reasons, a survey to determine need is vital. The Commission on Hospital Care urges all members of the medical profession and all other public-spirited citizens to give their utmost cooperation to this inventory in order that our nation's hospitals may be built where they are needed and where they can be operated to the best advantage of all of the people.

THE MANAGEMENT OF DIABETES MELLITUS IN GENERAL PRACTICE

ELLIOTT P. JOSLIN
Harvard Medical School, Boston, Mass.

Two outstanding discoveries made concerning diabetes in 1943 were (1) production of diabetes by administration of alloxan and (2) demonstration that there is an unsuspected incidence of diabetes in young men. The production of the disease in animals by administration of alloxan has opened a field of investigation.

Blotner et al reported studies on 45,650 selectees and volunteers, of whom 208 had diabetes, 126 had transient glycosuria, and 33 had "renal glycosuria," a higher percentage among youths than previously reported. Joslin is of the opinion that people should be more diabetic conscious and seek medical diagnosis earlier, so that treatment may be given as early as possible, thus affording a far better prognosis. A follow-up (1942-43) of 1,626 childhood diabetics showed that 7 were in the armed forces. One case record in this group showed the patient had a furunculosis causing a high blood sugar and Joslin points out that this is a warning against diagnosing diabetes when an infection is present, unless verified by other tests after the infection has disappeared. The others of the 7 cases were probably borderline cases. At the time none received insulin except temporarily, and in only one was the carbohydrate of the diet lowered below 200 mg. The fact that all of these patients had glycosuria was not a proof of their being diabetic.

There is a need for caution, therefore, in designating a patient a diabetic when the fasting sugar of the blood is normal, even if the two-hour blood sugar test indicates no return to the original fasting value or if intervening tests rise with capillary blood to 200 mg. or even above 200 mg., or with venous blood to 180 or as much as 220 mg.

Diabetes diagnosed early responds well to treatment. Army cases referred to the author are showing rapid improvement. The diet prescribed is 4 portions of 5 and 10 per cent carbohydrate vegetables daily; added to this 10 gm. of carbohydrate contained in a half-pint of cooked oatmeal (20 gm. more of carbohydrate); 50 gm. more found in three medium sized oranges or a total of 100 gm.: then bread, one slice, or approximately an ounce (30 gm.) or 15 to 18 gm. carbohydrate. Usually 3 slices daily is the limit. Later, substitutions for fruit, cereal and bread may be made. In one case described, the patient was advised to eat meat, fish, eggs, cheese and butter moderately so that protein would be about 100 gm. and the fat 100 gm . Many do well on this schedule.

Insulin therapy of this patient consisted of 8 units of crystalline insulin and 12 of protamine zinc insulin and the next morning, 12 units of crystalline and 24 units of protamine zinc insulin. After five days of this treatment, a glycosuria and a blood sugar of 76 mg. caused a change to 8 units of crystalline and 18 of protamine zinc insulin. After two weeks, again the dosage was lowered, this time to 4 units of crystalline and 16 of protamine zinc insulin. Finally, crystalline insulin was omitted and only 12 units of protamine zinc insulin given.

In milder cases 8 units of protamine zinc insulin may be given at first and raised or lowered. The full effect of protamine zinc insulin does not appear until the third day.

Diabetes is controlled in general by diet and protamine zinc insulin. Crystalline insulin is added only when protamine zinc insuln rises to 20, 24 or 28 unts. Above that, insulin reaction may occur in the night.

The two insulins are injected separately in this clinic. When the urine voided on rising or voided cne-half hour later is not sugar-free. 4 units of protamine zinc insulin are added until the urine voided on rising is found sugar-free or until 20 to 28 units are injected. If glycosuria is found present then or after meals, crystalline insulin is added in 4-unit doses, finally reaching one-third to one-half that of protamine zinc insulin.

The causes of death during 1942-1943 among diabetics whose onset of disease occurred in childhood were varied. Of the 1,626 cases discussed, 5 deaths were caused by infections. It is not yet determined whether such infections can be prevented by daily doses of sulfadiazine, but it is known that "infections in diabetes must not be tolerat-

ed." Another cause is appendicitis, and appendectomy is indicated, and even prophylactic removal of the appendix sometimes seem advisable.

Diabetic coma no longer seems justifiable. Whenever death is due to this cause, in Joslin's clinic, determination is made whether glucose or alkali had been administered. Patients with diabetic coma are given insulin, as patients having sufficient insulin do not develop coma. A deficiency of blood sugar due to excess of insulin is treated with glucose to neutralize the insulin.

Four of this series reported died from nephritis. Four others with this serious complication are now being treated and all are blind. This is a serious complication in the young diabetic who disregards diet and calories and lives with the help of insulin. Joslin rarely finds nephritis in diabetics who control their disease with diet and insulin.

Reprinted from the *Quarterly Review of Medicine,* May, 1945.

GERMAN DOCTORS UNDER NAZISM

Shortly after V-E Day, Colonel Edward D. Churchill, Allied Mediterranean forces' surgical consultant, toured six German military hospital areas and reported his findings to American correspondents.

As we all know, American doctors' care of wounded in this war has been and continues phenomenal as regards its record-breaking percentages of cures and its development of new techniques and remedies. There was considerable expectation that the German doctors, what with German medicine's world-wide pre-Hitler fame and the well-known German thoroughness and energy, would have some pretty phenomenal achievements of their own to report from their war hospitals, once the Allies could crack into Fortress Europe and look around.

The Allies cracked in, all right; but Colonel Churchill did not find the phenomenal German medical achievements. His over-all conclusions after inspecting six German hospital areas was that German handling of wounded was about 20 years behind the American procedure.

Going into details, he reported that the German army doctors as a rule just casually passed up badly wounded men on the assumption that they were going to die anyway, whereas our doctors fight to the last gasp for every wounded man's life, and frequently win; that the German physicians never had realized the maximum possibilities of blood transfusion, and used antiquated apparatus for what transfusions they did give; that as for professional pride in pulling off near-miracles of cure or amelioration, such pride just was not in the bulk of German military physicians and surgeons. By and large, they were victims of an apathy and a lack of ambition which would enrage a typical American doctor.

This is a sad backslide from Germany's once proud position as world leader in medicine and surgery. How did it happen? Are there any lessons in it for us?

It began to happen soon after Hitler saddled his brand of totalitarianism on Germany. It seems reasonable to conclude that it happened **because** Hitler saddled Nazi totalitarianism on Germany.

For one thing, in the Nazi philosophy, your race and politics mattered far more than your brains and talents. You might be a brilliant physician or surgeon or research scientist, but if you were a Jew or an anti-Nazi of any description, you had to get out of Germany if you could, or go to a concentration camp if you couldn't get out. Thus Hitler and his crew decimated German science. Their master-race convictions, too, led logically to such grisly preverisons of scientific research as the use in some concentration camps of humans of "inferior" breed as guinea pigs for various laboratory experiments.

Ruled by the politicians and browbeaten by Nazi gangsters, German medicine—on the strength of Colonel Churchill's findings, at any rate—withered, and in due time the German armed forces paid, in the form of bigger death totals than they need have suffered.

The lesson in the German experience seems clear enough. It is that there is no substitute for a free, bold and inquisitive medical profession, or for generously financed and expertly staffed medical research, carried on year in and year out. It is devoutly to be hoped that the lesson of the German medical collapse will not be lost on us.

Courtesy of *Collier's,* the National Weekly.

THE JOB OF A CONSERVATIVE IN AN ERA OF CHANGE

At a time of tumultuous transition when all our social institutions are in process of rapid and profound change—when the only certain thing that can be said of the future is that it is uncertain—then the only tenable position for a conservative is to be a progressive. It is absurd to speak of maintaining the status quo when the status quo itself is in flux.

The job of the true conservative under such conditions is to defend as staunchly as he may whatever values or characteristics of the past he honestly believes to be essential to sound progress in the future; while at the same time lending a sympathetic ear to every new cause that seems to contain the promise of good things.

Any institution that fails to strike out boldly and swim with an overwhelming tide will find itself at the mercy of that swirling waters. Likewise, any group that seeks merely to hold back the irresistible currents of change and progress can only lose whatever influence it might have had upon the direction and destiny of the tides. Such a group, by abdicating its social responsibilities, will have isolated itself from society. It will surely lose the public confidence that is indispensable to its own existence as a social force.

The public looks to medicine for leadership in medical affairs. If medicine were now to treat the public to the spectacle of medical men leading in the evolution of the social-medical system of the future, rather than being somewhat reluctantly carried along with the tide, then the world would indeed be our apple. The pearl beyond price, is public confidence. Without public confidence we are lost. With it, the future will be ours to shape and to mould.

Reprinted from *New York Medicine* July 5, 1945.

THE CLINICAL SIGNIFICANCE OF PALPABLE SPLEEN

WILLIAM F. LIPP, ELLEN H. ECKSTEIN and A. H. AARON
Department of Medicine, University of Buffalo,

The spleen in several thousand consecutive patients, most of them ambulatory, was observed for several months to several years, with repeated examinations.

The spleen was palpable in 128 (5.6 per cent) of 2,274 patients, 68 males and 60 females, aged from 20 to 60 years. Enlargement of the spleen was found in 34 of the 128 (25.5 per cent). Thirteen patients had cholelithiasis, 8 of them without symptoms, and 15 were considered to have generalized visceroptosis. Diseases of the liver are considered a cause of splenomegaly, and cholelithiasis may be associated with splenomegaly as the result of liver injury. In 41.4 per cent of the cases an exhaustive clinical search showed no adequate cause of the palpable spleen. However, the finding of a palpable spleen should always be recorded and may be of definite value in future studies of the patient.

Reprinted from the *Quarterly Review of Medicine,* May, 1945.

ORGANIZATION SECTION

CHARLES P. AUSTIN, M. D., President

Directory

ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892
423 HEARD BUILDING, PHOENIX, ARIZONA

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George O. Bassett, M. D. (1950) Prescott
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Northern District
Hal W. Rice, M. D. (1948) Bisbee
Southern District

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O. E. Utzinger, M. D. (1947) Ray
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COMMITTEES*

Scientific

Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

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Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

Scientific Assembly—Charles P. Austin President-elect and Chairman (1945), Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

Scientific Education and Postgraduate Activities—A. H. Dysterheft (1946), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; C. E. Yount, Prescott; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

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Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

* Terms expiring in 1945 will hold until 1946.

President's Message

ACTIVITIES REPORT

In accordance with the action of the Council and the House at the Annual Meeting, April, 1945, the *PUBLIC HEALTH EDUCATION PROGRAM* for the season 1945-1946 is now under way. The executive bodies voted $5,000 for such a program for a year, hoping to bring

to the public of this state the latest information on matters relating to their health. This was voted as a three way program: Radio, Press, Legislative. The following is the program under the three heads indicated:

THE RADIO: The radio programs were contracted on a yearly basis with programs of 15 minutes to be broadcasted weekly over KTAR of Phoenix. These programs, under the title, *THE MEDICAL QUARTER HOUR*, are now broadcast each Monday evening at 6:15 over KTAR, and each Friday evening at 9:15 over KVOA, Tucson. As funds permit other stations will be added. Beginning with September 17, the new fall series will go on the air under the title, *"GUARDIANS OF YOUR HEALTH"*, the following being the program titles:

"DOCTORS GUARD YOUR HEALTH"
Haven Emerson, M. D., New York City, and others.

"HEALTH IN YOUR TOWN"
M. R. French, Paw Paw., Mich. and others.

"HEALTH IN YOUR STATE"
A. J. Chesley, M. D., St Paul, and others.

"GUARDING THE NATION'S BORDERS"
Thomas Parran, M. D.,and others.

"HEALTH IN OUR HEMISPHERE,,
John A. Ferrell, M. D., New York, and others.

"HEALTH IN THE SCHOOLS"
Chas. C. Wilson, M. D., New York, and others.

"SANITATION AN UNFINISHED JOB"
H. G. Callison, M. D., South Carolina, and others.

"GUARDING THE FOOD FRONT"
Willard H. Wright, M. D., USPHS, and others.

"TRAINED PUBLIC HEALTH WORKERS"
Wm. P. Shepard, M. D., San Francisco, and others.

"THE PUBLIC HEALTH LABORATORY"
W. D. Stovall, M. D., Madison, and others.

CONTROLLING CONTAGIOUS DISEASES"
Carl A. Wiltzbach, M. D., Cincinnati, and others.

"HEALTH CRUSADES"
Chas. E. Lyght, M. D., New York, and others.

"HEALTH EDUCATION"
Donald Armstrong, M. D., New York, and others.

Each of the radio programs is in the nature of an interview with from two or more physicians participating, each an authority of national note in his or her respective field. The Radio programs take well over half of the funds allocated for public health education purposes.

THE PRESS: The press programs consist of articles under the caption, *"In the* **INTEREST** *of your* **HEALTH**". Mats were made of the line cuts and are supplied the various papers running the articles. Space is paid for and contracted on a yearly basis. In the majority of instances the articles are appearing bi-weekly or monthly for the present, some are weekly, however. It is the plan of the committee to cover as many health topics as possible rather than repeat the same articles in the press statewide. At the time of this writing the following papers have entered into contract—and have expressed their pleasure at having this feature: The *Arizona Silver Blade* (Miami), *Casa Grande Dispatch, Coolidge Examiner, Copper Era* (Greenlee County), *Florence Blade-Tribune, Graham County Guardian, Nogales Herald, Nogales International, Prescott Courier, Republic & Gazette* (Phoenix), Tucson Newspapers, Inc. *(Citizen & Star), Yuma Daily Sun.* The Phoenix and Tucson dailies carry the radio advertising rather than the health articles which may be added at a later date. Other pages will soon be added. Where two papers in a county are used both the radio programs and health articles will be featured with one paper carrying the health article and the other the radio ads. A more extensive press program will be carried on in those localities not reached by the radio programs to a satisfactory degree. The Press program is taking a good 'slice' of the appropriation for health education purposes. Watch your local papers for the articles and ads appearing on these health topics. At least one paper in each county will carry the health articles.

LEGISLATION: A minor part of the funds allocated is being used for legislative purposes as it has never been the practice of this Association to expend any appreciable funds for this purpose either directly or indirectly. The First Special Session of the Seventeenth Legislature convened on September 10. The Association program, conducted by the Committee on Public Policy and Legislation, consisted of the introduction of a bill—called *the Enabling Act for Medical Service*—setting up an act under which a medical plan may operate in this state. The only expense in connection with this Legislation

is the attorney's fee for advice on legal phases of the bill prepared in our Phoenix office in conjunction with the Arizona Blue Cross Service. The Association Committee 'carries the ball' through legislative ups and downs and has no lobbyist in any sense of the word. A Special Session of 20 days, as allowed by law, is a rather brief period for deliberation on such an important measure as the one proposed. However, every effort will be exerted to secure the passage of this *Enabling Act* so that a plan may get under way without a two year wait for a regular session of the Legislature. The Association Committee have had this *Enabling Act* in mind and before them for study for a year or more. After it was in shape and included the various protective features for the subscribers—the Act embracing the best features of such acts now in operation in other states—it was submitted to an attorney for legal soundness. A considerable research was necessary on the attorney's part to determine the soundness of the act. It is felt that we now have an Enabling Act second to none in the United States and sincere effort will be made by the Committee on Legislation to secure its immediate enactment. It is legislation any legislator should be proud to give his constituents.

OTHER ASSOCIATION ACTIVITIES

SCIENTIFIC: Now that travel and convention restrictions have been removed, the Annual Meeting for this coming spring may now include the usual scientific session. *The Committee on Scientific Assembly* will immediately go into this matter and set up an even 'bigger and better' program than we have had in the past. We were permitted to have no such program this past season due to rulings of the ODT. It has been the custom of the Association for several seasons past, through the Committee on Scientific Assembly, to invite a group of instructors from some prominent medical college to put on a complete scientific program during the Annual Meeting. That will probably be the procedure again this year as the membership have found these programs to be of postgraduate nature both in presentation and subject matter. The newest and latest in medical and surgical procedure has been brought to the membership in these lectures. All Arizona physicians have been tied down at home during the war, there being no time for them to take a few weeks off and attend national clinics for medical and surgical refreshment. With physicians now gradually coming back from service, it may soon be possible for the physician who has put in strenuous hours on the home front to get away for awhile. Like the postman, the physician's usual holiday is one in line with his work and of study.

It is the hope of the Council that the Committee on Scientific Education and Post Graduate activities may now resume their former inter-county meetings with their helpful interchange of scientific programs.

COUNTY SOCIETY PARTICIPATION: It has been gratifying to have the immediate response from the county societies on the Association activities. The *Committee on Public Health Education,* for example, submitted their press program to the county societies for suggestions and criticisms with replies coming back by return mail in the majority of instances. On all committee activities the local societies have been most prompt in submitting their suggestions.

MEMBERSHIP PARTICIPATION: Mail ings from the Central Office direct to the membership—such as the questionnaires relative to a Medical Service Plan—bring around a two-thirds response. This is considered good as a state-wide response, but it is hoped with YOUR PERSONAL ATTENTION AND INTERST that this response may come up to the 100% bracket as a foregone conclusion.

PUBLIC RESPONSE: The public—state-wide—is expressing its appreciation for the health education programs now in effect. Every mail brings response from some section of the state. The radio programs have brought many requests for additional information on the health topics discussed. To meet these requests, the Committee now has on hand at the central office numerous pamphlets on Whooping Cough, Heart Disease, The Common Cold, Undulant Fever, and others. These are free for the asking to those requesting the same. The Press is expressing its appreciation for the type of articles being published under the caption, "In the Interest of Your Health". Such comments as: "We believe your Association is performing a good service in discussing health matters through the press" are characteristic of those received.

ADDITIONAL PUBLIC HEALTH EDUCATION FEATURES: The Committee on Public

Health Education anticipates adding still other features to its yearly program as the year continues. Details for simple, yet practical, community health lectures—with simple exhibits—are now being worked out and will be presented to the county medical societies for their consideration in the near future. The various county medical societies would be responsible for putting on these programs in their own communities with the Central Office assisting.

The association committees are conducting these programs; let us have your suggestions and opinions.

C. P. Austin M.D.

President

MEMBERSHIP ROSTER, 1945

Arizona Medical Association

APACHE COUNTY MEDICAL SOCIETY

Dysterheft, Arnold H.
McNary

Herbst, Kenneth A.
McNary

Salsbury, C. G. (assoc.) *
Ganado

Spining, W. D. (assoc.) *
Ganado

* Associate Members

COCHISE COUNTY MEDICAL SOCIETY

Adamson, E. W.
Douglas

Allessi, N. V.
Douglas

Atonna, Guy B.
Douglas

Causey, Paul S.
2801 St. Charles St.
New Orleans, (15) La.

Duncan, A. K.
Douglas

Gain, Douglas D. *
15 E. Monroe, Phoenix

Gans, Carl H.
Morenci

Helm, Hugh M.
Douglas

Hess, Geo. H.
Bisbee

Hunt, Charles H.
Bisbee

Parrish, F. W.
Bowie

Rice, Hal W.
Bisbee

Shoun, A. N.
Benson

Wilson, John C.
Willcox

Zinn, P. P.
Bisbee

* Transferred to Maricopa

MEMBERS IN SERVICE

Bregman, E. H.
Tombstone

Graham, Duncan G.
Bisbee

Montgomery, R. E.
Douglas

Nugent, A. G.
Douglas

Piepergerdes, C. C.
Bisbee

Saba, Joseph
Bisbee

Walsh, James S.
Douglas

COCONINO COUNTY MEDICAL SOCIETY

Fronske, M. G.
Flagstaff

Manning, G. F.
Supt. State Dept.
Health, Phoenix

Raymond, R. O.
Flagstaff

Scott, A. R.
Flagstaff

Sechrist, Chas. W.
Flagstaff

MEMBERS IN SERVICE

Barnes, H. A.
Flagstaff

Creighton, Carol C.
Flagstaff

Hein, Walter F.
Williams

Kittredge, D. W.
Flagstaff

GILA COUNTY MEDICAL SOCIETY

Bosse, A. J.
Globe

Brayton, Nelson D.
Miami

Clark, Adrain E.
Globe

Cron, Cyril M.
Miami

Harper, T. C.
Globe

Harris. I. E.
Miami

Huestis, Chas. B.
Hayden

Kelly, Marcus G.
Miami

Noice, Russel R.
Maimi

MEMBERS IN SERVICE

Aarni, John
Hayden

Gunter, Manning *
Globe

Wheeler, Norman O.
Globe

* Killed in Action

GRAHAM COUNTY MEDICAL SOCIETY

Butler, F. W.
Safford

Langdon, G. W.
Safford

Nelson, D. E.
Safford

Stratton, J. Newton
Safford

MEMBERS IN SERVICE

Condell, Lyle A.
(deceased)
Safford

Knight, F. W.
Safford

GREENLEE COUNTY MEDICAL SOCIETY

Austin, Charles P.
Morenci

Laugharn, Chas. H.
Clifton

Stratton, Robt. A.
Morenci

MEMBERS IN SERVICE

Fife, Karl L.
Duncan

MARICOPA COUNTY MEDICAL SOCIETY

Adams, Mabel India
1110 N. 25th St.
Phoenix

Armbruster, A. C.
234 N. Central Ave.
Phoenix

Armour, Paul
112 S. 12th Ave.
Phoenix

Baier, Frederic D.
137 N. 2nd Ave.
Phoenix

Bakes, Edwin C.
15 E. Monroe
Phoenix

Baldwin, Louis B.
15 E. Monroe
Phoenix

Barfoot, Geo. R.
15 E. Monroe
Phoenix

Barker, Clyde J. sr.
15 E. Monroe
Phoenix

Beauchamp, H. K.
(deceased)
Phoenix

Beck, L. D.
7 W. McDowell Rd.
Phoenix

Bloomhardt, S. I.
15 E. Monroe
Phoenix

Bralliar, Floyd B.
Wickenburg

Brinkerhoff, D. E.
926 E. McDowell
Phoenix

Browne, Trevor G.
15 E. Monroe
Phoenix

Burtch, L. A. W.
125 W. Monroe
Phoenix

Caniglia, S. R.
15 E. Monroe
Phoenix

Carlson, Donald G.
926 E. McDowell
Phoenix

Case, Paul H.
15 E. Monroe
Phoenix

Charvoz, Elton R.
15 E. Monroe
Phoenix

Clohessy, T. T.
15 E. Monroe
Phoenix

Cohen, Matthew
15 E. Monroe
Phoenix

Conner, S. K.
926 E. McDowell
Phoenix

MARICOPA COUNTY—(Continued)

Cruthirds, Archie E.
15 E. Monroe
Phoenix

Dagres, Lucille M.
15 E. Monroe
Phoenix

Day, M. L.
926 E. McDowell
Phoenix

Denninger, Henri S.
Glendale

Dirks, Maitland S.
425 N. 4th St.
Phoenix

Drane, James E.
112 N. Central Ave.
Phoenix

Edel, Frank W.
15 E. Monroe
Phoenix

Enfield, Geo. S.
15 E. Monroe
Phoenix

Fahlen, F. T.
112 N. Central Ave.
Phoenix

Felch, Harry J.
15 E. Monroe
Phoenix

Flinn, Robt. S.
15 E. Monroe
Phoenix

Flohr, Martin C.
Tolleson

Forster, Wesley G.
926 E. McDowell
Phoenix

Foster, R. Lee
15 E. Monroe
Phoenix

Fountain, Wayne
11 W. Jefferson
Phoenix

Fournier, Dudley T.
15 E. Monroe
Phoenix

Franklin, Henry L.
15 E. Monroe
Phoenix

Frissell, Ben Pat
15 E. Monroe
Phoenix

Frost, Thos. T.
15 E. Monroe
Phoenix

Furth, William Guy
11 W. Jefferson
Phoenix

Gain, Douglas D.
15 E. Monroe
Phoenix

Garrison, I. L.
540 W. McKinley,
Phoenix

Gaskins, Duke R.
15 E. Monroe
Phoenix

Gatterdam, E. A.
15 E. Monroe
Phoenix

Gibbes, Helen S.
2233 N. Alvarado
Phoenix

Gilbert, K. M.
Chandler

Gudgel, Harry B.
15 E. Monroe
Phoenix

Hagan, John L.
2603 N. Central Ave.
Phoenix

Hamer, Jesse D.
15 E. Monroe
Phoenix

Harbridge, D. F.
15 E. Monroe
Phoenix

Harris, Karl S.
15 E. Monroe
Phoenix

Hartgraves, T. A.
926 E. McDowell
Phoenix

Hartman, Stanford
926 E. McDowell
Phoenix

Hernandez, R. A.
240 E. Madison
Phoenix

Hilton, Robt. K.
Litchfield Park

Holmes, Fred G.
15 E. Monroe
Phoenix

Irvine, Geo. B.
Tempe

Jekel, Louis G.
15 E. Monroe
Phoenix

Johnson, James L.
15 E. Monroe
Phoenix

Johnson, Philip L.
1102 N. Central Ave.
Phoenix

Jordan, Fred C.* (deceased)
15 E. Monroe
Phoenix

Kent, Melvin Lloyd
Mesa

Kilgard, Frank M.
125 W. Monroe
Phoenix

Kingsley, A. C.
15 E. Monroe
Phoenix

Kroeger, Hilda H.
State Dept. Health
Phoenix

Leff, M. I.
Glendale

Little, Stillman D.
15 E. Monroe
Phoenix

Love, Layton A.
184 Los Robles Ave.
Litchfield Park-Subd.

Lytton-Smith, James
926 E. McDowell
Phoenix

Matanovich, M.
15 E. Monroe
Phoenix

McCracken, Paul
1206 W. Madison
Phoenix

McIntyre, A. J.
11 W. Jefferson
Phoenix

McKeown, H. J.
926 E. McDowell
Phoenix

McKhann, Geo. G.
15 E. Monroe
Phoenix

McMartin, H. L.
1206 W. Madison
Phoenix

McVay, L. Clark
15 E. Monroe
Phoenix

Meason, J. M.
Chandler

Medigovich, D. V.
15 E. Monroe
Phoenix

Melton, B. L.
15 E. Monroe
Phoenix

Milloy, Frank J.
15 E. Monroe
Phoenix

Mills, Harlan P.
Phoenix (deceased)

Moore, Jas. R.
15 E. Monroe
Phoenix

Moran, Tressa R.
425 N. 4th Street
Phoenix

Ohl, Howard J.
15 E. Monroe
Phoenix

Ovens, James M.
926 E. McDowell
Phoenix

Palmer, Charles B.
125 W. Monroe
Phoenix

Palmer, E. Payne
5 E. Monroe
Phonix

Palmer, Ralph F.
15 E. Monroe
Phoenix

Park, J. Minor
505 W. McDowell
Phoenix

Patterson, John H.
234 N. Central Ave.
Phoenix

Patterson, W. B.
Mesa

Penn, R. L.
Avondale

Pennington, John W.
15 E. Monroe
Phoenix

Phillips, Earle W.
15 E. Monroe
Phoenix

Phillips, Robt. T.
15 E. Monroe
Phoenix

Ploussard, Chas. N.
15 E. Monroe
Phoenix

Pohle, Ernest E.
Tempe

Randolph, Howell S.
15 E. Monroe
Phoenix

Randolph, Victor S.
15 E. Monroe
Phoenix

Reese, Forrest L.
15 E. Monroe
Phoenix

Robb, Mayo
15 E. Monroe
Phoenix

Rogers, George K.
926 E. McDowell
Phoenix

Rosenquist, R. Winfield
25 W. 8th Street
Tempe

Rosenthal, Maurice
1033 E. McDowell
Phoenix

Ross, Norman A.
15 E. Monroe
Phoenix

Rubel, Geo. C. (deceased)
109 Sunland Ave.
Buckeye

Running, E. Henry
15 E. Monroe
Phoenix

Ryerson, Paul M.
1505 E. McDowell
Phoenix

Saxe, Louis J.
717 W. Palm Lane
Phoenix

Schoffman, Wm. F.
926 E. McDowell
Phoenix

Sharp, Floyd B.
15 E. Monroe
Phoenix

Sharp, W. S. (deceased)
Mesa

Shelley, A. A. (deceased)
Phoenix

Shembab, Cecilia
1117 W. Jefferson
Phoenix

Sherrill, W. P.
324 W. McDowell
Phoenix

Snyder, Bertram L.
15 E. Monroe
Phoenix

Stevens, Robt. H.
15 E. Monroe
Phoenix

Stroud, R. J.
702½ Mill Ave.
Tempe

Sult, Charles W.
15 E. Monroe
Phoenix

Toland, Virgil A.
15 E. Monroe
Phoenix

Tompkins, L. M.
Gilbert

Tucker, J. B.
14 N. Central Ave.
Phoenix

Tuthill, Alexander M.
15 E. Monroe
Phoenix

Vernetti, Lucy
15 E. Monroe
Phoenix

Ward, R. Leslie
Buckeye

MARICOPA COUNTY—(Continued)

Watkins, W. Warner
15 E. Monroe
Phoenix

West, O. C.
14 N. Central Ave.
Phoenix

Whiting, Spencer D.
11 W. Jefferson
Phoenix

Williamson, Geo. A.
15 E. Monroe
Phoenix

Wills, E. C.
11 West Jefferson
Phoenix

Woern, Wm. H.
15 E. Monroe
Phoenix

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Phoenix

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Phoenix

Bate, Thomas H.
Phoenix

Bendheim, O. L.
Phoenix

Borah, Charles E. *
Phoenix

Brown, Preston T.
Phoenix

Condon, D. J.
Phoenix

Craig, Carlos C.
Phoenix

Davis, Robt. L.
Phoenix

DePinto, Angus J.
Phoenix

Fillmore, A. J. *
Mesa

Greer, Joseph M.
Phoenix

Haines, R. S.
Phoenix

Hall, Norman D.
Phoenix

Herzberg, Benjamin
Phoenix

Hurianek, Z. A.*
Phoenix

Hussong, R. W.
Phoenix

Jeffery, V. J.
Buckeye

Ketcherside, H. D.
Phoenix

Kober, Leslie R.
Phoenix

Lentz, Joseph S.
Phoenix

Lufty, Louis P.
Phoenix

Merrill, M. W. *
Phoenix

Mills, C. Selby
Phoenix

Neff, Bayard L.
Mesa

Palmer, E. Payne, Jr.
Phoenix

Palmer, Paul V.
Phoenix

Peterson, Kenneth E.
Phoenix

Pohl, von, C. L.
Chandler

Polson, Donald A.
Phoenix

Porter, Dwight H.
Phoenix

Purcell, H. M.
Phoenix

Rice, A. G.
Chandler

Rice, Philip E.
Glendale

Schnabel, G. P.
Phoenix

Shup , Reel *
Phoenix

Smith, Leslie B.
Phoenix

Smith, W. Jewell
Phoenix

Stump, Robert M.
Phoenix

Sult, Charles W. Jr.
Phoenix

Swasey, Lloyd K.
Phoenix

Tanaka, Paul
Phoenix

Thayer, Kent H.
Phoenix

Thoeny, Oscar W.
Phoenix

Thomas, John Wix
Phoenix

Truman, George C.
Mesa

Tuveson, L. L.
Phoenix

Van Epps, C. E.
Phoenix

Warrenburg, C. B.
Phoenix

Williams, O. O.
Phoenix

Woodman, Thomas W.
Phoenix

* Returned to Practice

MOHAVE COUNTY MEDICAL SOCIETY

Brazie, Walter
Kingman

White, Toler R. (deceased
Kingman

MEMBERS IN SERVICE

Koehn, Carl L.
Goldroad

Orlando, Wm. F.
Kingman

NAVAJO COUNTY MEDICAL SOCIETY

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Holbrook

Johnson, Wm. Andrew
Winslow

Morton, Wm. G.
Winslow

Sprankle, Paul D.
Winslow

Wright, M. G.
Winslow

PIMA COUNTY MEDICAL SOCIETY

Allen, F. W.
20 E. Ochoa
Tucson

Arntzen, J. L.
516 E. Third St.
Tucson

Atwood, H. J.
Ajo

Bensema, C. E.
1800 E. Speedway
Tucson

Bernfeld, Michael
123 S. Stone
Tucson

Biddle, Dake
123 S. Stone
Tucson

Bigglestone, H. C.
23 E. Ochoa
Tucson

Bledsoe, Nelson C.
1811 E. Speedway
Tucson

Bloom, Benson
4 E. Congress
Tucson

Bonnell, H. G.
416 N. Park Ave.
Tucson

Brady, Thos. A.
650 S. Country Club
Tucson

Brown, Earl H.
130 S. Scott
Tucson

Carrada, Luis N.
175 E. 12th Street
Tucson

Cates, Thos. H.
129 S. Scott
Tucson

Closson, Esther M.
4 E. Congress
Tucson

Clyne, Meade
110 S. Scott
Tucson

Cobb, Virginia M.
4 E. Congress
Tucson

Cohen, Morris D.
1534 E. Speedway
Tucson

Davis, W. Claude
33 E. Broadway
Tucson

Dixon, Geo. L.
2716 E. 4th St.
Tucson

Donahue, John L.
4 E. Congress
Tucson

Dryer, Ralph G.
130 S. Scott
Tucson

Edwards, B. B.
521 E. 3rd Street
Tucson

Faris, Hervey S.
115 S. Stone
Tucson

Fitzgerald, G. H.
1811 E. Speedway
Tucson

Flood, Clyde E.
110 S. Scott
Tucson

Gault, Wm. H.
110 S. Scott
Tucson

Gore, V. M.
123 S. Stone
Tucson

Gotthelf, Ed J.
4 E. Congress
Tucson

Grauman, S. J.
4 E. Congress
Tucson

Gregg, Fred C.
123 S. Stone
Tucson

Gungle, E. J.
Marana

Hartman, Geo. O.
115 S. Stone
Tucson

Hausmann, R. K.
110 S. Scott
Tucson

Hayden, Edward M.
115 S. Stone
Tucson

Hayhurst, Darrell E.
1717 E. Speedway
Tucson

Hill, Donald F.
4 E. Congress
Tucson

Howard, Lewis H.
Court House, Health
Unit - Tucson

Huffman, Ira E.
521 E. 3rd Street
Tucson

James, H. C.
4 E. Congress
Tucson

Kibler, Chas. S.
110 S. Scott
Tucson

Kroeger, C. R.
116 W. Alameda
Tucson

Laidlaw, Elizabeth
4 E. Congress
Tucson

Lamb, H. L.
P. O. Box 1749
Tucson

Lee, Joseph G.
Tucson
2629 E. 8th

Lieberman, A. L.
4 E. Congress
Tucson

Lindberg, A. L.
23 E. Ochoa
Tucson

Lyon, Wm. R.
316 E. Speedway
Tucson

Mahoney, Dan L.
4 E. Congress
Tucson

Mahoney, Vernon L.
614 N. 4th Ave.
Tucson

PIMA COUNTY—(Continued)

Mills, Chas. W., (dec's'd)
123 S. Stone
Tucson

Nagoda, Ed J.
4 E. Congress
Tucson

Oatway, W. H. Jr.
123 S. Stone
Tucson

Omer, Joy A.
4 E. Congress
Tucson

Oyler, Raymond F.
130 S. Scott
Tucson

Patterson, C. E.
123 S. Stone
Tucson

Presson, Virgil G.
130 S. Scott
Tucson

Purcell, Geo. W.
109 S. Scott
Tucson

Rudolph, Royal W.
4 E. Congress
Tucson

Schultz, Wm. M.
110 S. Scott
Tucson

Schuster, B. L.
22 S. Warren Ave.
Tucson

Schutzbank, F. B.
4609 E. Cooper St.
Tucson

Semoff, Milton
2440 E. 6th St.
Tucson

Smelker, V. H.
4 E. Congress
Tucson

Smith, R. K.
4 E. Congress
Tucson

Starns, Charles E.
1616 E. 6th St.
Tucson

Tappan, Vivian
San Clemente Addn.
Tucson

Thomas, Chas. A.
130 S. Scott
Tucson

Thomas, N. K.
130 S. Scott
Tucson

Thompson, A. B.
168 W. Broadway
Tucson

Townsend, S. D.
311 E. Congress
Tucson

Watkins, Evelyn G.
4 E. Congress
Tucson

Watson, Samuel H.
110 S. Scott
Tucson

Webster, Clara S.
4 E. Congress
Tucson

Welton, P. C.
1040 N. Park Ave.
Tucson

Whittle, C. C.
130 S. Scott
Tucson

Williams, Marguerite
4 E. Congress
Tucson

Wilson, R. A.
130 S. Scott
Tucson

Witzberger, C. M.
614 N. 4th Ave.
Tucson

Woodard, J. H.
4 E. Congress
Tucson

Wyatt, B. L.
1800 E. Speedway
Tucson

Zemsky, Boris
4 E. Congress
Tucson

——— MEMBERS IN SERVICE ———

Brainard, H. H.
Tucson

Callander, R. J.
Tucson

Carrell, W. D.
Tucson

Engelder, A. E.
Tucson

Farness, O. J.
Tucson

Hastings, R. E.
Tucson

Hewitt, W. R.
Tucson

Hicks, R. A.
Tucson

Holbrook, W. Paul
Tucson

Kirmse, Alvin
Tucson

Kitt, W. Stanley
Tucson

Kohl, Harold W.
Tucson

Lewis, Donald B.
Tucson

Linton, C. S.
Tucson

Littlefield, J. B.
Tucson

Mandel, F. H.
Tucson

Maury, F. H.
Tucson

Mikell, M. R.
Tucson

Palmer, M. R.
Tucson

Perkins, F. P.
Tucson

Sarlin, C. N.
Tucson

Secrist, D. L.
Tucson

Shultz, W. G.
Tucson

Sickler, James S.
Tucson

Stacey, John W.
Tucson

Steen, W. B.
Tucson

Storts, B. P.
Tucson

Thompson, Hugh C., Jr.
Tucson

Thompson, H. E.
Tucson

Ure, W. G.
Tucson

PINAL COUNTY MEDICAL SOCIETY

Hamer, John D.
Tiger

Jackson, William
Coolidge

Lehmberg, H. B.
Casa Grande

Maxwell, G. E.
Coolidge

Nevins, C. R.
Casa Grande

Ong, John R., Jr.
Ray

Steward, G. B.
Coolidge

Swackhamer, Chester R.
Superior

Utzinger, O. E.
Ray

Walker, Glen H.
Coolidge

——— MEMBERS IN SERVICE ———

O'Neill, J. T.
Coolidge

Steward, B. L.
Florence

Tucker, W. P.
Superior

SANTA CRUZ COUNTY MEDICAL SOCIETY

Bryant, James H.
Patagonia

Chapman, G. William
Los Mochis, Sonora
Mexico

Fitts, T. B.
Nogales

Gonzalez, J. S.
Nogales

Harker, G. L.
Nogales

Hogeland, Frank T.
Cananea, Sonora
Mexico

Houle, E. C.
Nogales

Marsh, L. Cody
123 S. Stone
Tucson

Smith, Charles S.
Nogales

——— MEMBERS IN SERVICE ———

Noon, Z. B.
Nogales

YAVAPAI COUNTY MEDICAL SOCIETY

Allen, Jas. H.
Prescott

Bassett, George O.
Prescott

Carlson, Arthur C.
Cottonwood

Connor, John W.
Seligman

Fahy, John E. (assoc.)*
Whipple

Hough, H. A.
Prescott

Looney, R. N.
Prescott

Ochs, Melvin L.
Clarkdale

Reed, E. C. (assoc.)*
Whipple

Swetnam, C. R. K.
Prescott

Walsh, James M.
Jerome

Yount, C. E.
Prescott

Yount, Florence B.
Prescott

* Associate Members

——— MEMBERS IN SERVICE ———

Born, E. A.
Prescott

Jolley, E. B.
Clarkdale

McNally, Jos. P.
Prescott

Southworth, H. T.
Prescott

Yount, C. S., Jr.
Prescott

YUMA COUNTY MEDICAL SOCIETY

Cain, William C.
Yuma

Corliss, Philip G.
Somerton

Fenderson, Wayne A.
Yuma

Knotts, R. R.
Yuma

Phillips, Wm. A.
Yuma

Podolsky, A. I.
Yuma

Rider, Robert E.
Yuma

Taylor, John T.
Yuma

——— MEMBERS IN SERVICE ———

Gwinn, Frank W.
Yuma

Kimball, Albert, P.
Yuma

Kimball, Robt. M.
Yuma

Matts, R. M.
Yuma

Powell, Chas. S.
Yuma

Stanley, John F.
Yuma

An associate member is one not licensed to practice in the state but who is engaged in Veteran's Administration, Indian Service, and the like.

Woman's Auxiliary

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1619 Palmcroft Drive

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THE WOMAN'S AUXILIARY TO THE MARICOPA COUNTY MEDICAL SOCIETY

Mrs. William F. Schoffman, President of the Maricopa County Auxiliary announced at a Board Meeting that a year book for Maricopa County was in the making and that the by-laws are being revised for this group.

The activities for the year will be to continue the Snack Bar for Service men each Wednesday: aid in the Cancer Control program: aid the Red Cross in making of afghan squares: the making of scrap books for local hospitals. The juvenile delinquency program as outlined by National will be carried out as it can be fitted into our local program.

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Phoenix, Arizona

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Tempe, Arizona

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Phoenix, Arizona

Hygeia:
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335 W. Cambridge,
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Legislation and Parliamentarian
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1819 N. 11th Ave.,
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1138 W. Culver,
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Mrs. James R. Moore
305 W. Granada,
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Telephone:
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65 W. Encanto Drive,
Phoenix, Arizona

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Rt. 2 Box 216 C
Mrs. Louis G. Jekel Phoenix, Arizona
Rt. 2 Box 216 D

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G. Robert Barfoot
Robert T. Phillips

MEDICO - LEGAL SECTION

IN THE SUPREME COURT OF THE STATE OF ARIZONA

WORKMANS COMPENSATION

Liability of corporate employer for warehouse employee who lost an eye, while on duty when a bottle of Cola exploded.

MORGAN, J.:

Respondent Laws was employed by the petitioner as a guard at one of its warehouses in Phoenix. His hours of employment were from 3 p. m. to 11 p. m., with no time off for lunch. His instructions were to bring his lunch and eat it on the premises. He was credited with 8-½ hours per day, the additional half hour being allowed which would ordinarily have been consumed if he had eaten off the premises. He had been in the employ of the petitioner for nine months.

On August 24, 1944, Laws drove to the warehouse shortly before 3 o'clock. He left his lunch, including a bottle of Royal Crown Cola, on the seat of the car parked near the door of the warehouse. At 3 p. m. he relieved the guard who worked on the prior shift. At about the hour of 3:35 p. m. he stepped out to his automobile, returned with his lunch and the bottle of Cola. About two months before the company had furnished a water cooler for drinking purposes. The cooler consisted of a 25 gallon galvanized garbage can equipped with a faucet. It was mounted on a barrel, the top being about 4 feet 8 inches above the floor. It was filled with ice and some water twice a day, and maintained for drinking purposes. It was the custom of Laws and other employees to cool bottles of beverages, such as Cola, which they had brought for their lunch or consumed on the job, upon the ice in this cooler. No rules or relaxations

existed against this practice. No other cooler facilities existed. In pursuance of this custom, Laws first washed off the bottle at a water faucet, raised the cooler lid to place the bottle of Cola on the ice. Before the bottle came in contact with the can or ice, and at a point opposite applicant's face—probably just over the cooler rim—the bottle exploded cutting his eye and hand, the injury resulting in the loss of the sight of one eye.

Claim for accident benefits under the workmen's compensation law was filed by the employee with the respondent Industrial Commission, the insurance carrier. Hearing was had, and on November 6, 1944, the commission made findings of facts substantially as above set forth, and further to the effect that (1) Laws sustained an injury by accident arising out of and in the course of his employment; (2) that the personal injury entitled him to accident benefits. Petitioner's protest and application for rehearing were seasonably filed and, being denied, brought the case to this court for review by the statutory certiorari proceedings.

There is no controversy as to the facts. The assignment and propositions of the petitioner raise two questions. First the injury suffered by respondent Laws was not in the *course* of his employment; second, the accident did not *arise out of* his employment. The petitioner and both respondents have presented the case with great zeal and marked ability. The briefs and arguments have been both lucid and comprehensive. The industry of counsel has failed to uncover an exactly parallel case. We take it that none exists.

The facts being admitted, the sole question for our determination is one of law. Did the conceded fact under the law authorize the commission to make the award? True, the commission made a finding that the accident arose out of and in the course of the applicant's employment. If there was any controversy as to the facts, such a finding would have to be considered as one of fact. Since, however, there is no issue as to the facts, and the situation is one from which differences may be drawn, the finding constitutes in effect a conclusion of law. To determine whether the conclusion is justified will require a consideration of the statutes, a review of the decisons of this court construing the act, and an examination of the authorities generally as to when an accident arises out of and in the course of employment.

The purpose and intent of the law must be given effect, but due regard must also be had as to the respective rights of employer and employee. A burden or liability not within the terms or spirit of the law is not to be imposed upon industry. On the other hand, the act must be construed liberally to effect its purposes and to provide compensation for workers who suffer injury from accidents arising out of and in the course of their employment. No rule is to be adopted and applied which will make ineffectual the evident purpose of the law that these covered by the act who are injured while engaged in industrial work are to be compensated. When a machine is broken it must be repaired. When an appliance is worn out it must get renewed. When, through accident arising out of the course of his employment, a worker is injured, he should be allowed due compensation, and the cost for such compensation is charged against industry to the same extent as repair to a broken machine.

Article 18, section 8 of the Constitution of Arizona directed the legislature to enact a workmen's compensation law requiring compensation to be paid workmen in case of injury from specific accidents arising out of and in the course of such employment. The constitutional provision provided that such compensation should be paid where the accident "is caused in whole or in part, or is contributed to, by a necessary risk or danger of such employment."

Pursuant to that mandate, the legislature has enacted what is generally referred to as the workmen's compensation law, now appearing as sections 56-901 to 56-977, inclusive, A.C.A. 1939.

Section 56-931 provides that when an employee is injured by accident arising out of and in the course of his employment" . . . unless purposely self-inflicted, shall be entitled to receive, and shall be paid compensation for loss sustained on account of such injury"

Again, in section 56-936, the following appears:

"Every employee covered by insurance . . . who is injured, by accident arising out of and in the course of employment . . . provided, the same are not purposely self-inflicted, shall be paid such compensation for loss sustained on account of such injury, ..."

In section 56-930 it is provided that personal injury by accident arising out of and in the course of employment includes injury caused by the willful act of a third person directed against an employee because of his employment.

From the foregoing it will be seen that where an employee is injured by an accident arising out of and in the course of his employment he is entitled to compensation. He cannot be denied recovery unless his injury is purposely self-inflicted. His negligence or lack of care is no defense. Furthermore, the accident, if as defined in the constitution, need not arise wholly out of and in the course of employment. Recovery can be had if the accident "is caused in whole, or in part, or is contributed to, by a necessary risk or danger of such employment." No exception is made where injury or death is caused by an act of God.

This court on numerous occasions has construed the law and announced certain rules pertaining to what accidents come within the

terms of the act. The first decision, Ocean Acc. & Guar. Corp. v. Ind. Com., 32 Ariz. 265, 257 Pac. 641, has been widely cited, and has been particularly called to our attention by all of the parties in this action. We quote as follows:

" . . . it is indispensable that the injury should both arise out of and in the course of the employment. It is not enough that it occur in the course of the employment nor that it arise out of the employment. Both are essential and must be established by the claimant

"We believe the decisions, English and American, are agreed that the compensation laws should be given a liberal construction, with a view of effectuating their evident purpose of placing the burden of injury and death upon industry, and we are in entire accord with that construction. However, when it clearly appears that a claimant has failed to establish that his accidental injury arose out of and in the course of his employment, or either, the duty of so declaring cannot be evaded. On the contrary, if we entertain a serious doubt we shall feel it our duty not to hesitate to apply a liberal rule of construction in favor of the claimant.

"The Compensation Act is not an insurance law requiring the employer to compensate every injury an employee suffers while in his employment, but only those accidental injuries that arise out of and in the course of the employment. As has been well said, to extend the law to cover all injuries sustained by an employee would be giving to employees protection against the common and everyday accidents to which all mankind is daily exposed, and make them a privileged class. Compensation must therefore be limited to those employees within the intendment of the legislation providing for it, and not extended to include cases clearly without its intent and purview. . . .

" . . . It is not sufficient simply to show employement and an injury during the period of employment. The employee must go further and show that the injury had its origin from a risk connected with the employment, and that it flowed from that source as a rational consequence."

In the Pacific Fruit Express Co. v. Ind. Com., 32 Ariz. 299, 258 Pac. 253, the court again considered what was meant by the phrase, "arising out of and in the course of employment", in a case where the employee for his own comfort seated himself under a car to converse with coworkers. While so engaged he was injured. The court pointed out that "he abandened his work and for the time being was doing nothing he was engaged to do", and held that in such a case the accident did not arise out of and in the course of the employment. The following statement was made:

" . . . What he was doing at the time of his injury was not reasonably necessary to his health or comfort, such as quenching his thirst, relieving his hunger, protecting himself from excessive heat or cold—acts generally recognized as incidental to his employment."

Again, in Netherton v. Lightning Del. Co., 32 Ariz. 350, 258 Pac. 306, this court was required to determine whether the death of an employee, who was killed by a bolt of lightning while driving his employer's truck in the due course of his employment, was compensable. The court called attention to the fact that under statutes such as ours, making either death or injury compensable for accidents arising out of and in the course of employment, two rules have been applied by the courts; One to the effect that such an accident was compensable as arising out of the employment; the other that the accident was not compensable unless by reason of his employment the workman was more exposed to injury by lightning than were others in the same locality. The opinion sets out the standard as follows: "But the standard for testing these facts is always the same, to-wit, This rule was announced in the opinion of Did the employment increase the danger?" Justice Lockwood, and in the concurring opinion by Chief Justice Ross, the holding being that there could be no recovery in the case. Justice McAlister dissented on the ground that the deceased met his death not only in the course of his employment but arising out of it, within the meaning of the workmen's compensation act. Apparently, however, he assented to the rule as stated by Justice Lockwood, "Did the employment increase the danger?" Even on the assumption that this is a correct standard to determine whether an accident arose out of the employment, it seems to us now that the majority misapplied the rule in that case. We will comment upon this later.

It will be observed that in the case mentioned the court failed to take into consideration the constitutional definition of compensable accidents, appearing in article 18, section 8, Const. of Arizona. In a late decision, In re Mitchell, (Ariz.) 150 Pac. (2d) 355, the court was called upon to determine whether the death of an employee as a result of carbon tetrachloride poisning was compensable under the terms of the act. The commision had made an award allowing compensation. The petitioners relied on our decision in Pierce v. Phelps Dodge Corp., 42 Ariz. 436, Pac. (2d) 1017, in which we had held that an accident must be some sudden or instantaneous effect or occurrence, the implication being that there could be no recovery unless there was an external act or occurrence, usually one of violence, which caused the injury or death. In commenting upon that rule, and in effect overruling the Pierce case, we said:

"Furthermore it appears that the Pierce case we did not discuss or consider, probably because it was not called to our attention, the phrasing of the constitutional mandate to enact a workmen's compensation law. Certainly the legislative intent can best be gleaned by references to section 8, article 18 of the Arizona Constitution, which provides that compensation shall be . . . paid . . . if in the course of such employment personal injury to or death of any such workman from any accident arising out of, and in the course of, such employment, *is caused in whole, or in part, or is contributed to,* by a necessary risk or danger of such employment, or a necessary risk or danger inherent in the nature thereof '

"It will be noted that the italicised part of the Constitution just quoted is broader and more comprehensive than the legislative enactment appearing under section 56-936, A. C. A. 1939. A construction of the latter must be goverened by the constitutional provision.

"Applying these principles to the instant case it is readly apparent that the poisning of the deceased, which caused his death, was 'caused in whole, or in part, or was contributed to, by a necessary risk or danger of such employment.''

The statement which we have quoted from the Mitchell case has full and complete application to the facts in that case since the accident was the result of a necessary risk or danger of the employment. Whether the constitutional definition is broader and more comperhensive generally than the legislative enactment, is a debatable proposition. The rules applied in Ocean Acc. & Guar. Corp. v. Ind. Com., supra, and prior cases, with a single exception which we will advert to presently, may be harmonized with the rule of the Mitchell case.

It is the law that in construing statutes in relation to constitutional provisions, the courts must take into consideration the principle that every statute has to be read in the light of the constitution. Thus, words or phrases used in the statute are presumed to have been used in the same sense as in the constitutional provision on the subject, particularly if such constitutional provision is adopted shortly before the enactment of the statute. Except for potent reasons, courts are not given to terms appearing in the statute a meaning different from that in which they are used in the constitution. 50 Am. Jur. 261, sec. 273, "Statutes"; McCullough v. Commonwelth of Va., ,72 U. S. 102, 43 L. Ed. 382; Anselmi v. Rock Springs, 53 Wyo. 223, 80 Pac. (2d) 419, 116 A. L. R. 1250. This rule of construction, however, is not to be taken too literally, and can be given only partial application in the construction of the Arizona workman's compensation act.

Sec. 8 of article 18, supra, is not a grant of power to the legislature, but a command directing it to exercise a power which it already possessed. The constitutional mandate does not restrict the legislature in its inhearent powers to go beyond the terms of the constitution in making injuries from accidents, which are not mentioned therein, compensable. Home. Acc. Ins. Co. v. Ind. Com., 34 Ariz. 201, 269 Pac. 501; Atkinson-Kier Bros., etc., v. Ind. Com., 35 Ariz. 48, 274 Pac. 634. While obvisously the workmen's compensation act must be construed to cover all accidents as defined in the constitution, this does not mean that accidents which are not conprehended within the constitutional definition may not be made conpensable by the legislature. The rule of construction of statutes in relation to constitutional provisions must be applied to the extent of construing the act to cover all accidents as defined in the constitution. But this is not to say that other accidents which may be comprised within the statutory term "arising out of in the course of employment" beyond these embraced within he constitution definition, are not compensable.

It seems evident that when an accident to an employee in the course of his employment is caused in whole or in part, or is contributed to by a necessary risk or danger of such employment, or a necessary risk or danger inherent in the nature thereof, this would be one *arising out of* the employment. The test to be applied in accidents mentioned in the constitutional mandate to determine whether they arise out of the employment is, were they caused in whole or in part, or contributed to by a necessary risk or danger of the employment, or *inherent* in its nature. The standard is not, did the employment increase the danger, or that by reason of the employment the workman is more exposed to injury than are others not engaged. The standard in this case would be, was the risk or danger necessary or inherent in the employment.

The legislature did not confine compensable accidents to these produced by or caused by necessary risks or dangers of the employment. accidents arising out of and in the course of the The law provides for compensation for any employment. The act widens the fields of accidents. Every accident resulting in injury, unless willfully self-inflicted, comes within its provisions if it arises out of and in the course of the employment. The law does not define what "arising out of and in the course of employment" means. It does say that the phrase shall include an injury caused by the willful act of a third person directed against an employee because of his employment. Nowhere is there any limitation on what accidents may not be included within the phrases. Neither in terms nor by implication is there any limitation that the term "arising out of" shall be limited to cases where the employment increases the

danger of where the workman is more exposed to injury than are others so engaged.

For these reasons, we feel compelled to disavow the rule of the Netherton case. Neither under the constitution nor under the statute can it be held to be a proper measure to ascertain if an accident arises out of the employment. In justice to the court it is proper to say that the rule adopted in the Netheren case was largely influenced by the dicision of the Massachusetts court in In re McNicols, 215 Mass. 497, 102 N. E. 697. The McNicols case has, in effect, been repudiated by the Massachusetts court itself in Caswell's Case, 305 Mass. 500, 26 N. E. (2d) 328, where an employee was injured by the collapse of the building in which he was working caused by a hurricane. In this case, the court said:

> "The only other requirement is that the injury be one arising out of his employment. It need not arise out of the nature of the employment. An injury arises out of the employment if it arises out of the nature, conditions, obligations or incidents of the employment; . . . "

In the late case of Harvey v. Caddo DeSoto Cotton Oil Co., 199 La. 720, 6 Son. (2d) 747, the court had occasion to consider whether an accident to an employee, the result of a cyclone which demolished the employer's structure and injured the employee, was one arising out of the employment. We quote from the opinion:

> ". . . the accident must be the result of
> been so employed.
> some risk to which the employee is subjected in the course of his employment and to which he would not have been subjected had he not been so employed.
>
> "In determining, therefore, whether the accident 'arose out of' the employment, it is necessary to consider only this: (1) was the employee then engaged about his employer's business and not merely pursuing his own business or pleasure; and (2) did the necessities of that employer's business reasonably require that the employee be at the place of the accident at the time the accident occurred?"

The court called attention to various laborious efforts by many courts in weighing the evidence in order to discern whether the hazards to the employee had been increased due to the employment, and then concludes:

> "We prefer to place our decision on what we believe to be a sound footing, that is—that the deceased, by reason of his employment, was required to be in a building which fell upon him; that his death was due to the fact that his employment necessitated that he be at the place where the accident occured and that, therefore, giving the compensation act the liberal interpertation to which it is entitl-

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ed, the accident arose out of, and was incident to the employment."

It seems to be settled beyond any doubt that an accidental injury arises in the course of employment when it occurs, as in this case, within the period of employment at a time where the employee had a right to be in the performance of his duties and while either fulfilling his duties of engaged in doing something incidental thereto—here in caring for his lunch. Employers Liability Corp. v. Montgomery, 45 Ga. Ap. 634, 165 S. E. 903; Bryant v. Fissell, 84 N. J. L. 72, 86 Atl. 458; Weis Paper Mill Co. v. Ind. Com., 293 Ill. 284, 127 N. E. 732; 71 C. J. 658, sec. 404, "Workman's Compensation Acts." In the present case since the employee had to eat on the premises, it follows that he had a right to properly care for his lunch. We feel, therefore, that the claim of the petitioner that the injury did not occur in the course of the employment is not sustainable.

From what has already been said it is apparent that the accident is not one which resulted from any necessary risk or danger of the employment, of inherent therein. It is not one of the accidents comprehended within the constitutional provision. It is one of the accidents which the law has provided for beyond these listed by the constitution. The legislature had this right. The real question in this case, therefore, is, did the accident arise out of employment. In considering this phase, we are mindful of the rules which have been promulgated. The employer is not an insurer. If the accident occurs while the employee is engaged in some act having no relation to his duties for his own comfort or otherwise, or has abandoned his occupation even temporarily, the injury does not arise out of the employment. The rule that the employer is not an insurer simply means that only accidents which are included within the terms of the act are compensable. The question here is, do the facts in this case bring the accidental injury within the terms of the law.

To determine whether this case comes under the law, a consideration of the decisions of other courts will be helpful. An injury sustained by an employee while in the act of satisfying his thirst is generally held to arise out of the employment where the employee uses the facilities provided by the employer. Bradshaw v. Aronovitch, 170 Va. 329, 196 S. E. 684; 71 C. J. 671-2. On the other hand, it has been held that where the employee does not use the facilities in the customary way and he is injured, the accident does not arise out of the employment. Mann v. Glastonbury Knitting Co., 90 Conn. 116, 96 Atl. 368. Since, under our law, negligence does not bar recovery it would appear that this case would have no application here.

In Bolden's Case, 235 Mass. 309, 126 N. E.

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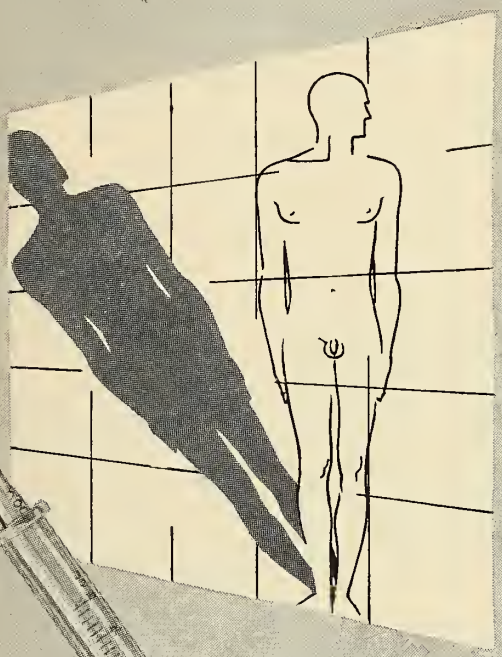
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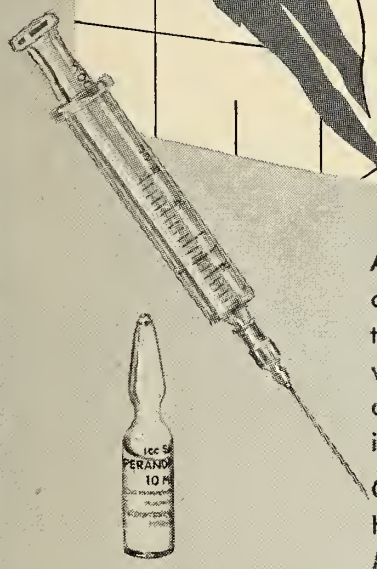
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668, where an employee was injured from a bursting bottle, which belonged to him, while he was filling it at a bubble fountain furnished by the employer, it was held that the injury did not arise out of the employment. The bottle was being filled by the employee for his own convenience in order that the chill might be taken off. The court said this was no part of the employer's business, and the use of the bottle in this manner was not sanctioned by the employer; the act was outside the scope of his employment.

The Industrial Commission of Colorado v. Enyeart, 81 Colo. 521, 256 Pac. 314, the court stated that if a workman brought his lunch on the job and was poisoned by ptomaines therefrom, such an injury would not be held to arise out of the employment.

As opposed to these and similar opinions, we find many decisions to the effect that getting fresh air, smoking, resting, creating food or ice cream, quenching thirst by water, beer or wine, taking a bath, use of telephone or toilet or other facilities, washing, pressing working clothes, and transportation to and from work are treated as arising out of the employment:

Horovitz, Workmen's Compensation, pages 114 to 117;

DeStefano v. Alpha Lunch Co., 308 Mass. 38, 30 N. E. (2d) 827, where waitress, receiving meals as part of her pay, contracted trichonosis as a result of eating insufficiently cooked pork furnished by the employer, held to be a personal injury and accident arising out of the employment;

Vilter Mfg. Co. v. Jahnek, 192 Wis. 362, 212 N. W. 641, eating of ice cream by employee, at invitation of janitor of hospital where the employee was engaged in installing a refrigerator, and from which he contracted smallpox resulting in his death, held to grow out of his employment;

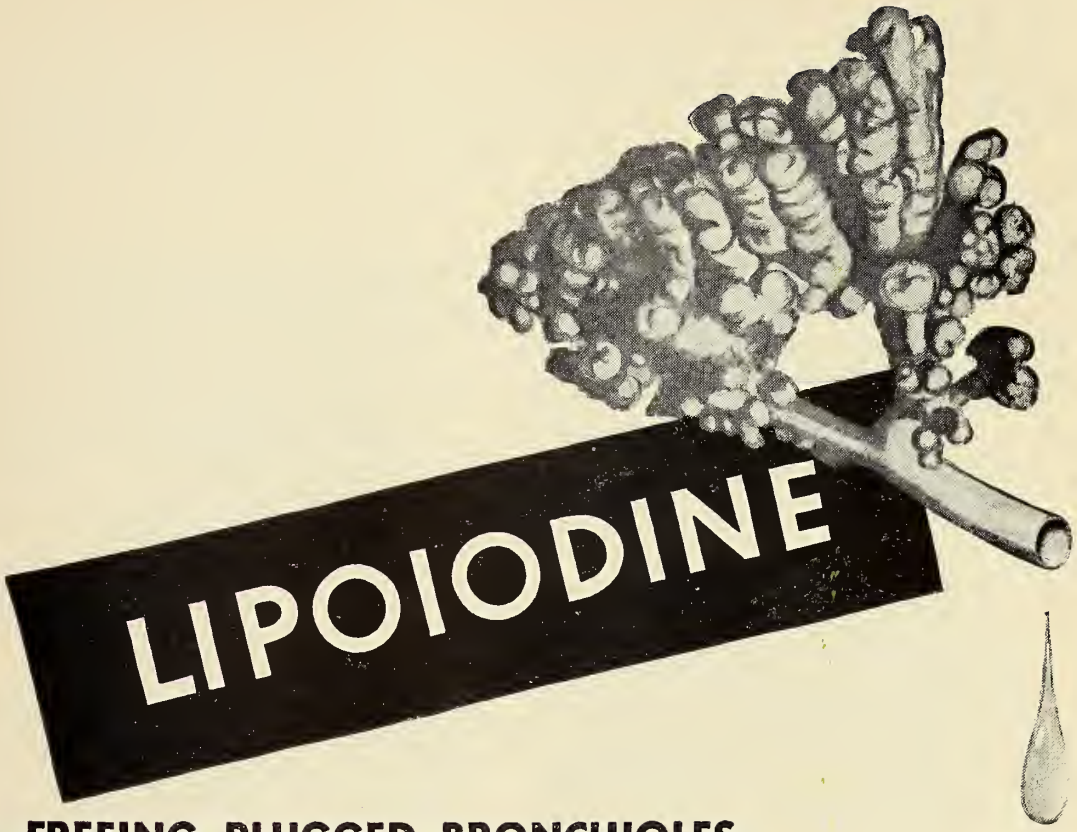
Elliott v. Ind. Acc. Com., 21 Cal. (2d) 281, 131 Pac. (2d) 521, where employee, for medicinal purposes, drank from bottle labeled wine, found in the employer's carpenter shop, which in fact contained a deadly poison resulting in his death, held to arise out of his employment;

In re Osterbrink, 229 Mass. 407, 118 N. E. 657, it was held that a workman drinking muriatic acid through mistake for his own bottle of drinking water arose out of his employment;

American Steel Foundries v. Czapala, 112 Ind. Ap. 212, 44 N. E. (2d) 204: In this case the workman's eye was injured as a result of the explosion of a glass bottle containing coffee which had been placed by him just inside the door of an annealing furnace, for the purpose of heating the coffee which he used with his lunch. It was held this was an injury arising out of his employment;

Whiting-Mead Coml. Co. v. Ind. Acc. Com.,





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178 Cal. 505, 173 Pac. 1105, where employee was injured through lighting a cigarette during working hours, through ignition of bandage on his hand which was saturated with turpentine, held to arise out of the employment;

Western Pipe & Steel Co. v. Ind. Acc. Com., 49 Cal. Ap. (2d) 108, 121 Pac. (2d) 35, where employer's cafeteria was closed and the employee went out to secure his dinner, and in crossing the street after parking his car was struck by an automobile, resulting in his death, held to arise out of the employment;

Ervin v. Ind. Com., 364 Ill. 56, N. E. (2d) 22, burns received by an employee from falling into a fire which he had built to warm himself as an incident to his employment, and which resulted in his death, was held to arise out of the employment;

Cudahy Packing Co. v. Parramore, 263 U.S. 418, 68 L. Ed. 366, where the deceased employee was killed in crossing a railroad track to his place of work, held to be an accident arising out of his employment.

In the present case if the lunch and Cola had been furnished by the employer to the employe Laws, and had been injured as disclosed by the evidence, nearly all of the authorities would indicate that the accident was one which arose out of his employment. In principle it would seem that the same rule should be applied here. What difference does it make who furnished the lunch. It was necessary for the employee to eat. He was authorized to bring his lunch on the premises and was required to care for it and consume it there. He was allowed an additional half hour to compensate for his lunch period. If the bottle had exploded when he was actually in the process of consuming his lunch, the claim could not well be made that the accident did not arise out of his employment because this was part of his job for which he was being paid. Does the fact that the bottle exploded when he was in the act of placing it on ice, to make it fit for consumption, alter the situation? We think not. Since the bringing and eating of his lunch on the premises during his hours of employment was one of the conditions of his employment, he most certainly had the right not only to care for it but also to properly prepare it for consumption.

It is our view that the accident to Laws arose out of the nature, conditions of his employment, within the meaning of the rule which has already been given. A machine must be given oil and cared for. If an employee is injured in handling the oil or tools required for the repair of any appliances in connection with his work, the accident is one that arises out of his employment. Likewise, employees working under the conditions as shown in this case of necessity must have sustenance. An accident arising from any preparation of their

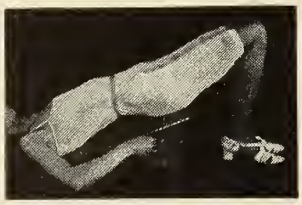
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food, or in eating, is just as much an accident arising out of the employment as in the case of caring for a machine or any other appliance. Since Laws had to eat on the job, he was not merely pursuing his own business or pleasure, but was actually engaged in his employer's business. The necessitities of his employer's business required him to be at the place of the accident at the time it occured. It is no answer to this to say that the accident was of such a character as might have occured at the employee's home or elsewhere, and that the employment in no way contributed to or caused the bottle to explode. To take such a position is to venture into realms of possibility. Such a conclusion would be based upon speculation and uncertainty. The evidence is such as to justify the conclusion that Law's injury was the result of a risk to which he was subjected in the course of his employment, and to which he would not have been subjected had he not been so employed. Under the facts the law sustains the commission's action.

The award is affirmed.

Book Reviews

"PATHOLOGY OF LABOR, THE PUERPERIUM, AND THE NEWBORN, By Charles O. McCormick, A. B., M. D., F. A. C. S.: Clinical professor of obstetrics, Indiana University School of Medicine; Consulting obstetrician to William H. Colman Hospital for Women, Indianapolis City Hospital, and Sunny Side Sanitarium. Published by the C. V. Mosby Co. St Louis, Missouri. Price $7.50.

The essentials of only the present-day obstetric thought are set forth in this symposium type textbook which is an outgrowth of a series of the author's lectures prepared for the senior medical students at Indiana University.

Pathology of labor comprises a great part of this book. In the chapter on abnormal labor we learn eutocia occurs where there is a balance between the active forces of expulsion and the passive forces of resistance. Labor may be abnormal because of the size, attitude, lie, and presentation of the fetus. Dystocia is classified into three parts. The first part, the faults in the powers, is a study of false labor pains, delayed labor, premature rupture of membranes, insufficient abdominal contractions, and rigid perineum. The treatment of prolonged labor warns of the use of powerful and dangerous drug pituitrin. The second part of dystocia, faults in the passages, often due to the faults of the soft parts as the vulva, vagina, cervix, uterine displacement and prolapse, teach that each may require cesarian section. Also included in faults of the soft parts are fibroid tumors, carcinoma—rare during child bearing period—and ovarian tumors which are believed to be indications for cesarian section. Faults of the bony pelvis comprises a very great study in the use of the pelvimeter in the diagnosis of types of pelves. Roentgen pelvimetry has many important diag-



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nostic usages. Chief of these are in the diagnosis of multiple pregnancy, visualization of malpresentations, relationship of fetal head to the maternal pelvis, and for estimation of gestation. The four common varieties of contracted pelves—general contracted, funnel, simple flat, and rachitic—merit a detailed description with suggested antenatal management, management of labor, and prognosis of labor. Obstetricians are cautioned to: "Carefully measure every patient." Third cause of dystocia, the faults of the passenger, excessive developement of the infant, rigor mortis, abnormalities, malformations, and abnormal presentations, is very well described. The control of the size of the baby is no longer attempted by the mother's diet. "Babies grow large despite starvation diets." A complete classification of both single and double monsters are given in the appendix. We learn the management of the two complications of normal mechanism types—presistent and complete occipitoposterior positions—generally attributed to disproportion, insufficient expulsive powers, and unrecognized pelvic peculiarities. Abnormal presentations of the passenger include breech, transverse lie, face, brow, parital bone, and compound, and the management of each. Also included in this section are secundines of which the usual faults are those of the cord, the membranes and the placenta, with important guiding principles and helps to be followed. Obstetric injuries play a great part in the pathology of labor. The author considers the most serious of these the rupture of the utrine body primarily due to overstretching and the indiscriminate use of pituitrin. The cervix is believed to be the most common site of parturition injury. Prophylactic treatment: "Delivery should not be attempted prior to complete dilatation." In the chapter on obstetric operations there are very detailed descriptions of indications and technics of twenty-four operations. There is a brief chapter on etiology, clinical course, diagnosis, and treatment of postpartum hemorrhage.

The second part of this book is a study of the pathology of the puerperium and is divided into two chief forms which are puerperal infection and puerperal hemorrhage. Exhaustion, long labor, trauma, and blood loss are conducive to infection. We learn of the great work of Dr. Semmelweis, a Hungarian physician, in discovering and severely laying down the principles of obstetric asepsis just a century ago, and the subsequent low maternal mortality rate from puerperal infection. During the last half decade, infection mortality rates have fallen due to the three factors, sulfonamide therapy, general use of intravenous blood, and penicillin. Puerperal hemorrhage is most often due to retained placenta tissue and retained portions of hydatiform mole. There is a study of the anomalies and diseases of the nipples, breasts, and anomalies of mammary secretions. Other complications of puerperium are after pains, constipa-

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tion, hemorrhoids, cystitis, anemia, phlebitis, and psychoses. These are discussed briefly.

In the chapter on pathology of the newborn we learn that the use of the recently discovered factor, vitamin K, is an important contributor in the treatment of accidents and injuries may be cephalhematoma, wounds of face and scalp, fractures, intracranial hemorrhage, and asphyxia neonatorium which may occur during pregnancy, during labor, or post partum. Curative measures are supplied. Conditions of congenital origin and conditions peculiar to the newborn period are given merely to give guiding knowledge since such cases are usually referred to pediatricians and surgeons.

The appendix contains a description of each technic of the improved present day methods of obstetric analgesia. Among these are the administration of rectal ether, sodiunm pentothal, and caudal anesthesia.

Inserted through the book are 191 illustrations including 10 in color. Also, a limited number of selected references are inserted.

Fifty obstetric aphorisms completes the book. A few follow: "Reproduction is woman's most biological function." "Labor is a physical feat, and college diplomas do not enhance its ease." "Forty ounces of urine a day keep convulsions away."

L. J.

"DOCTORS AT WAR." Edited by Morris Fishbein, M. D. Editor of the Journal of the American Medical Association and of Hygeia, The Health Magazine, chief editor of War Medicine. Chairman of the Committee on Information on the Division of Medical Sciences of the National Research Council Pp. 413 with Illustrations, Published by E. P. Dutton & Co., Inc. 300 Fourth Avenue, New York. $5.00.

"Doctors at War" in unique in that so many specialists well trained, qualified and anxious to perform their task satisfactorily, have been chosen to write on the subject that is absorbing all of their attention. The sixteen chapters that make up this book offer its readers a variety of subjects all relating to the Doctors at War. This is a book that should be read by every doctor in and out of the service because it pertains to their profession and is a story of what doctors and medical research have accomplished to save millions of American lives on the battle front and to protect the health of those of us remaining at home.

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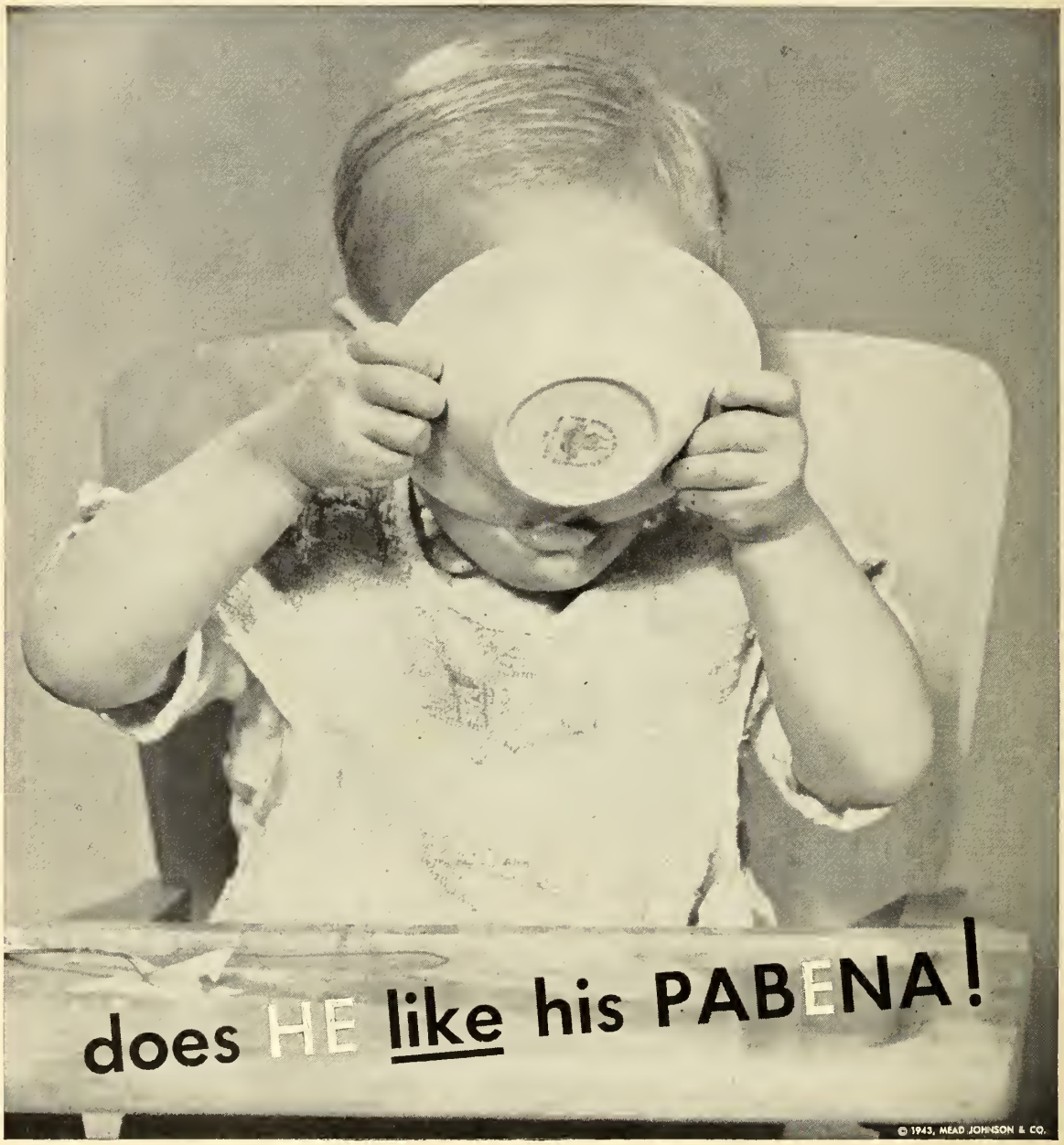
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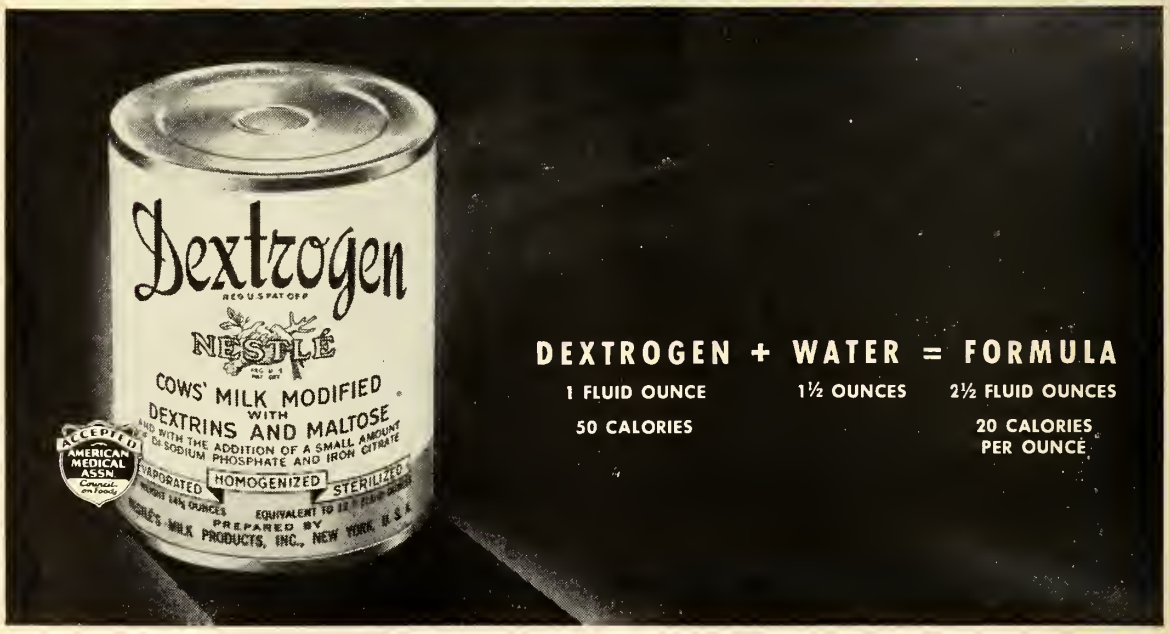
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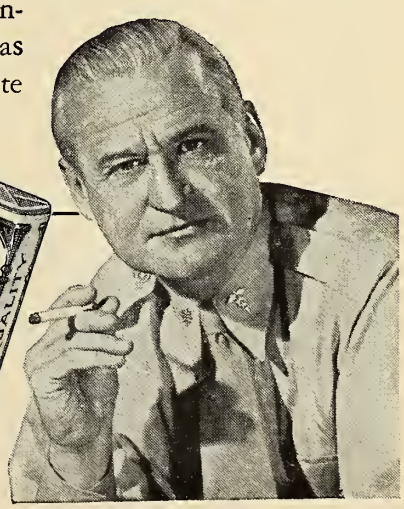
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*Larsen, N. P.: Observations with Penicillin, Hawaii M. J. 3:372 (July) 1944.

Stainsby, W. J.; Foss, H. L., and Drumheller, J. F.: Clinical Experiences with Penicillin, Pennsylvania M. J. 48:119 (Nov.) 1944.

Lockwood, S. J.; White, W. L., and Murphy, F. D.: The Use of Penicillin in Surgical Infections, Ann. Surg. 120:311 (Sept.) 1944.

Kenney, J. F.: Report of a Case of Staphylococcus Bacteremia Treated with Sulfadiazine and Penicillin, Rhode Island M. J. 27:663 (Dec.) 1944.

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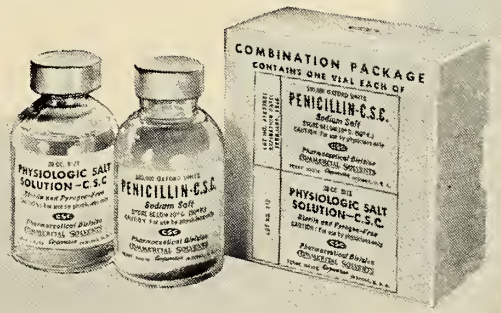
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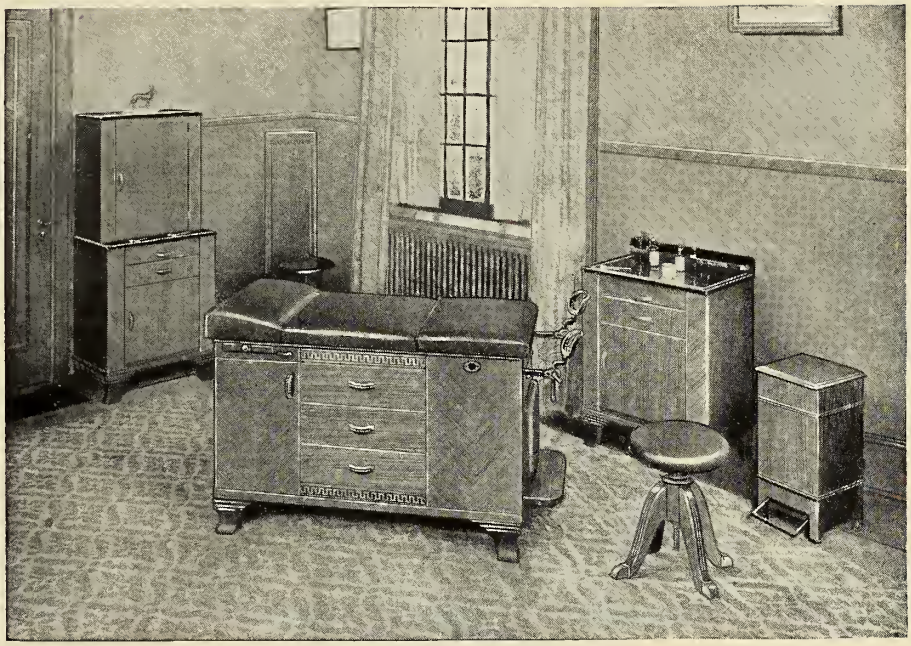
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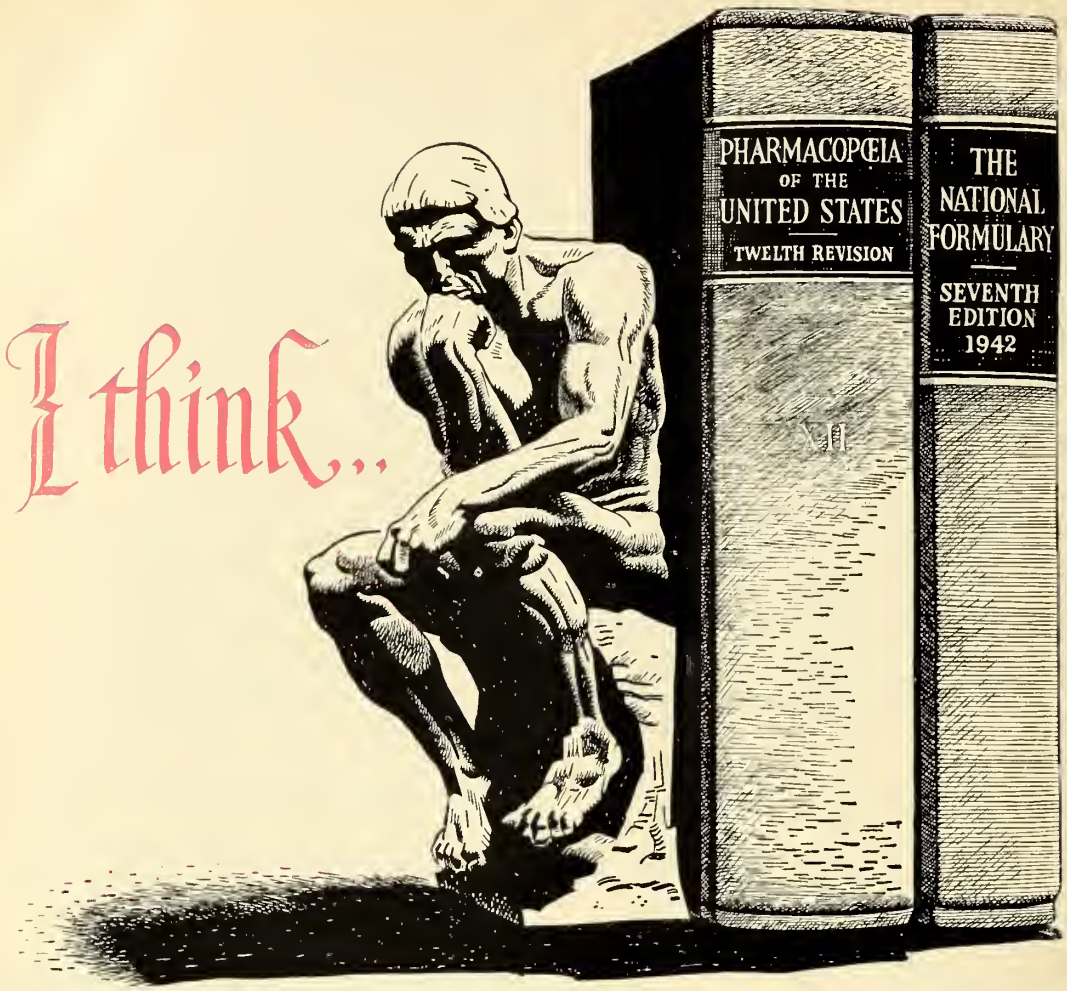
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SIGNIFICANCE OF SOME OF THE FUNDAMENTAL PHYSICAL FINDINGS IN EXAMINATION OF THE HEART

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THE significance and utility of some of the fundamental physical findings in the examination of the heart have been lost to many of the physicians of today. The causes for this are multiple and complex. The purpose of this discussion is not to examine the causes of this situation, but to emphasize the significance and utility of some of these fundamentals.

Proper evaluation of the condition of the heart cannot be ascertained without adequate estimation of the work being performed by that organ as reflected in the pheriphery. Thorough examination of the pulse, which is fast becoming a lost procedure, is of tremendous value in the examination of the heart. The size of the pulse gives one a rough estimation of the amount of blood the left ventricle is expelling with each contraction. As the wave of the pressure and blood from the left ventricular systole move down the arterial tree, the artery expands and then contracts, as shown in Figure 1. The size of this expansion gives one a rough idea of the volume of blood expelled from the left ventricle. Thus we have a small pulse in instances where there is interference with the filling or emptying of the left ventricle. The most common malady causing interference with filling of the left ventricle is mitral stenosis. Some rarer conditions which interfere with the blood getting into the left ventricle are pulmonary stenosis, pulmonary fibrosis, arterio-capillary fibrosis of the pulmonary bed, adherent pericardium and extreme pericardial effusion. The most common cause for interference with emptying of the left ventricle is aortic stenosis. A large pulse, on the other hand, is observed in conditions which will increase the output of the left ventricle, such as exercise, fever, hyperthyroidism or any condition increasing the metabolism of he body. As a rule a large pulse is present in aortic regurgitation, but this is not always true.

The contour of the pulse gives one additional invaluable information regarding the change in pressure and flow of blood in the arteries with contraction of the left ventricle. One of normal contour has the usual physiological requirements. A tracing of a pulse of normal contour is shown in the left upper tracing of Figure 2. A pulse which rises rapidly and falls rapidly is called a celer pulse. An extreme celer pulse is often called a water-hammer or Corrigan pulse. A pulse of celer contour denotes a leak at one or the other end of the system, right upper tracing of Figure 2. The most common place for this leak is in the pheriphery. Conditions causing vasodilitation of



Figure 1—Dilatation and contraction of an artery is shown diagramatically before, during, and after passage of the wave of pressure and blood from contraction of the left ventricle.



Figure 2—pulse tracing denoting contours of the pulse are shown. The left upper one is of normal contour, the right upper tracing is a celer pulse, the left lower one is a diagram of the way a plateau pulse feels to the examining finger, and the right lower tracing is a plateau pulse showing the anacrotic thrill.

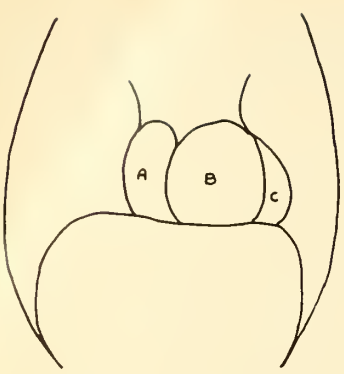


Figure 3—The normal relative positions of ventricles and the normal relationship of the diaphragm and the costal margins are shown diagramatically.

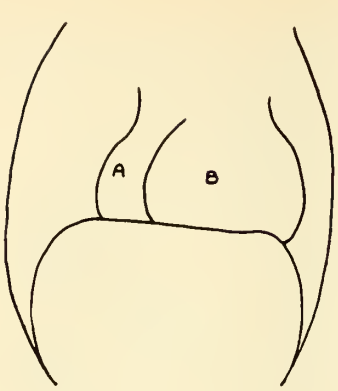


Figure 4—Effect of enlargement of the right ventricle upon the relationship of the ventricles and diaphragm and costal margins are shown diagramatically.

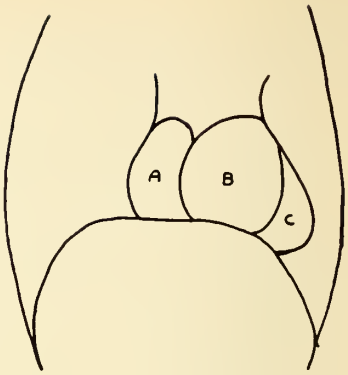


Figure 5—Effect of enlargement of the left ventricle upon the relationship of the ventricles and the diaphragm and costal margins are shown diagramatically.

the pheripherial vessels, such as exercise, fever or circumstances producing an increase in metabolism are the more common. The leak may be at the other end, however, due to insufficiency of the aortic valve. A plateau pulse signifies that there is some interference in the flow of blood and pressnre from the left ventricle. The pressure and blood volume changes in the arteries rise slower and are maintained longer. This gives the impression to the examining finger of the graph in the lower left corner of Figure 2. The actnal graphic recording, on the other hand, is more comparable with the graph in the right lower corner of Figure 2, which also illustrates the anacrotic thrill so frequently palpable over the cartoid artery in such conditions. Aortic stenosis is the classical condition causing such a pulse. The pulse is best examined by palpation of the brachial or cartoid arteries. Estimation of the size and contour of the pulse and evaluation of the findings are acquired only by continuous practice. Thus we see that these simple, yet fundamental examinations of the pulse give us indispensable information regarding the normal or pathologic physiology of the paripherial circulation which is caused by certain cardiac lesions. A celer pulse of large size denotes a leak in the periphery or at the aortic valve and manifestations of increased metabolism (exercise, fever, hyperthyroidism, etc.) or of an aortic insufficiency are immediately investigated A plateau pulse with or without an anacrotic thrill over the cartoid artery makes one promptly investigate for other evidence for aortic stenosis. A small pulse of normal contour brings to mind several lesions, the more common one is mitral stenosis. These few remarks, I think, emphasize the significance and utility of thorough examination of the pulse. Arrhythmias of the heart are best ascertained and studied by auscultation over the precordium.

Palpation for accessability of the ventricles is another very valuable adjunct in the evaluation of the condition of the heart. The normal relative positions of the ventricles in the thoracic cavity are shown graphically in Figure 3. It is to be noted that the right ventricle is anterior to he left ventricle and that only the tip of the left ventricle extends beyond the left border of the right ventricle. If the heart is enlarged it may be of tremendous diagnostic value to ascertain whether or not one or both of the ventricles are enlarged and if only one is enlarged, which one. This may be ascertained by palpating over the precordium. Enlargement of the right ventricle is graphically illustrated in Figure 4. In such a case the right ventricle enlarges in all directions and the anterior enlargement can be ascertained by palpation over the anterior precordium. A heaving and accessable right ventricle can thereby be felt. Enlargement of the left ventricle, on the other hand, will be ascertained by palpation to the left of the right ventricle and an

excessable and pulsation mass will be felt beneath the examining hand. This simple method of ascertaining ventricular accessability is of tremendous value in evaluation of certain cardiac lesions. In a case with an accessable right ventricle without an accessable left ventricle, a lesion would be anticipated which would put more work on the right ventricle and not on the left. Mitral stenosis is the most common of these lesions. If, on the other hand, the left ventricle was accessable and the right was not, a lesion which would place more work on the left ventricle would be anticipated. Enlargement of the left ventricle without enlargement of the right is shown graphically in Figure 5. If both ventricles are accessable there may be a combination of lesions which would place excessive work on both sides of the heart or a condition which would cause hypertrophy and dilitation of both ventricles. Of these arteriosclerotic heart disease is the more common. We should not forget, however, that the most common cause for right ventricular failure is left ventricular failure. The diagnosis of a significant mitral stenosis would be very questionable in a patient with an enlarged heart without the right ventricle being accessable and still more questionable if the left ventricle alone was accessable. Likewise, a diagnosis of a significant aortic regurgitation would be questionable if the right ventricle alone was accessable. On the other hand, an accessable right ventricle would be consistent with mitral stenosis and an accessable left ventricle with an aortic lesion if other manifestations were present.

Alteration in the excursions of the costal margins is another diagnostic sign which is unfamiliar to many physicians. Under usual conditions the mechanical relationship between the costal margins and the diaphragm is almost that of an equilibrium and upon inspiration the costal margins move laterally with vigor. A depression of the diaphragm gives it the mechanical advantage and causes the costal margin to lag or to be pulled in on deep inspiration. In a normal sized heart, as shown in Figure 3, the movements of the costal margins would be normal. Enlargement of the right heart would cause a depression of the left median leaf of the diaphragm and a lagging of the excursion of the left medial costal margin, Figure 4. Enlargement of the left ventricle depresses the left diaphragm and causes the left lateral and medial costal margin to lag or be pulled in during deep inspiration. This is shown diagramatically in Figure 5. Extreme enlargement of the right ventricle or a pericardial effusion depresses the dome of the diaphragm and causes a lagging of the movement of both medial costal margins or even a pulling in of the lower sternum on deep inspiration. These relationships are shown in Figures 6, 7 and 8.

Most physicians inspect for abnormal pulsations over the great vessels of the upper mediastinum, but palpation for an accessable aorta is rapidly being forgotten. It is not unusual

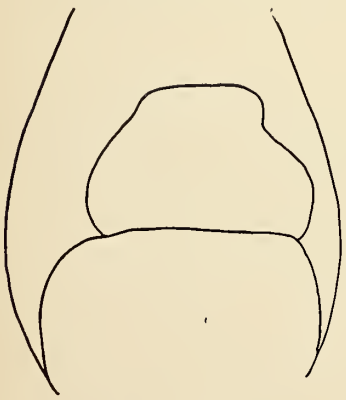


Figure 6—Effect of pericardial effusion upon the dome of the diaphragm from to anterior posterior aspect is shown diagramatically.

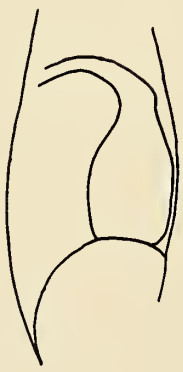


Figure 7—A diagramatic illustration showing the lateral relationship of a normal sized heart to the dome of the diaphragm, and of the anterior leaf of the diaphragm to the median costal margins and lower sternum.

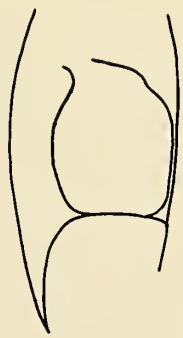


Figure 8—Depression of the dome and the anterior leaf of the diaphragm by enlarged pericardium is shown diagramatically. Such depression gives the anterior leaf of the diaphragm the mechanical advantage and causes both median costal margins and lower stem to lag or be pulled in with inspiration.

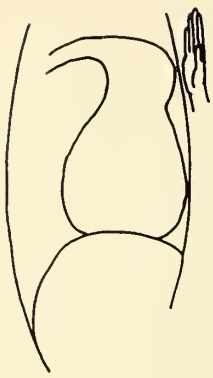


Figure 9—A diagram to illustrate palpation of an accessable aorta by the hand.

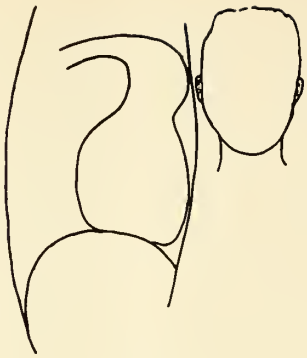


Figure 10—A diagram to illustrate palpation of an accessable aorta by the head.

for the dilated aorta not to be accessable by palpation with the hand, Figure 9, but it can be felt by the head if the head is applied over the accessable area, Figure 10. Time and again, the cause for a mass in the superior mediastinum can be ascertained by the presence of an accessable aorta, as ascertained by accessability with the head. It is not generally appreciated that the head is more sensitive in the palpation of the accessable aorta than is the hand.

The significance and utility of these few fundamental physical manifestations are obvious. A patient with a small pulse of normal contour, an accessable right ventricle without an accessable left ventricle, but with an accentuated pulmonary second sound would have mitral stenosis in over 95 per cent of the cases. A patient with a blowing systolic murmur at the mitral area with the left costal margin lagging or moving in on deep inspiration and the right costal margin moving normally, with an accessable left ventricle without an accessable right ventricle would have a relative mitral regurgitation due to dilitation of the mitral ring secondary to a dilated left ventricle. A patient in whom the costal angles did not increase and the lower sternum pulled in during inspiration and had a paradoxical pulse would have a pericardial effusion or an adherent pericardium.

SUMMARY

A few fundamental principles in the examination of the heart have been discussed and their utility and diagnostic significance have been emphasized.

CONTINUOUS CAUDAL OBSTETRICAL ANALGESIA

ROBERT J. BARFOOT, M. D.
Phoenix

WHENEVER a new medical discovery is important enough to find its way into the archives and annals almost always there is the same sequence of events. After the first latent period of warranted skepticism a shower of articles and papers, long and professional floods the press. Most of them are on the one hand, over-enthusiastic reporting a handful of cases with slipshod evulation, while others, representing the reactionary type, tear down the work perhaps on the strength of one or two shaky premature failures or other dire bad results. Still others point out that the drug or method or disease has been known for years and was long since abandoned by the old timers. After a time, however, exact, critical, and informative reports begin to appear, gradually, one by one. It is then and only then that one can evaluate the true worth and pedigree of the new medical brain child.

As in the case of other comparable recent medical advances—the discoveries of Sulfa drugs, Penicillin, Rh factor, and so on—the development of the continuous caudal method of obstetrical analgesia has gone through a similar cycle. There has been much discussion, pro and con. Now, after four years probation representing in this country alone well over 30,000 cases, and with reports from scores of good clinics, we can expect to derive clear cut

factual information about this method. It is the purpose of this article to present the picture exactly as it stands to date and from a practical viewpoint.

It is true that caudal anesthesia of itself is not new. Single injection caudal anesthesia was first used by Cathelin in 1901 only three years after intra-spinal anesthesia was first developed. It is also correct that single injection caudal anesthesia has been used in obstetrical cases by a number of authors whose reports date as far back as 1909 when Stockell used it first on his 141 cases. Any type of caudal obstetrical analgesia has never been brought forcibly to light, however, until in December of 1941 when Hingson first used continuous caudal anesthesia as obstetrical analgesia. This closely followed the introduction of continuous caudal anesthesia to surgery in October, 1941. Hingson justly deserves credit for developing this method of obstetrical analgesia and in giving it proper publicity to the medical profession.

Caudal anesthesia by definition implies the deposition of a locally acting anesthetic agent in the epidural space of the bony sacral canal where sacral nerve fibres traversing the canal are rendered incapable of transmitting pain. These nerve fibres supply the perineum and lower extremities and carry sensory nerves from the uterus. As greater quantities of anasthetic solutions are injected into the canal the anesthetic agent diffuses epidurally to higher levels and blocks off successively higher nerve roots. Hence 10 cc of a solution anesthetizes S3 and below, 20 cc anesthetizes L5 and below, 25 cc, L2 and below, 30 cc, T11 and below and so on. It is clear to see, then, that 20 to 30 cc of solution are appropriate amounts to inject to obtain satisfactory perineal and uterine anesthesia such as is required in obstetrical cases. It is clarifying to realize that uterine motor nerve fibers come from higher levels and via a different pathway. From this we can see that caudal anesthesia has no effect in halting labor.

Caudal anesthesia has its effect entirely outside of (epi) the dura. If the huge doses used in this method were injected subdurally into the spinal fluid dire results would follow. Although this is a hazard it seldom happens since the meningeal coverings of the spinal cord normally only reach a short distance into the upper reaches of the sacral canal (to the 2nd sacral segment) and the subdurally located spinal fluid is pretty well out of reach of the needles ordinarily used in caudal anesthesia.

The last four years have seen the development of many different techniques, tricks, and embellishments in technique in the administration of continuous caudal obstetrical analgesia. Basically they all attempt to accomplish the same objective—to bathe the nerves in the sacral canal with a continuous or repeated supply of anesthetic solution with a maximum of safety to the patient. An average basic technique is described below. A good knowledge of local anesthesia, anesthetic drugs, nerve physiology, and a thorough familiarity with sacral anatomy as well as proficiency in obstetrics is presupposed.

Equipment—

B. P. apparatus
Merthiolate spray
Spinal sheet, sterile draping
Syringes
 1—10 cc
 1—30-50 cc
Needles
 No. 25 "hypo"
 No. 20 1½ inch
 Small blunt pointed cannula to fit into ureteral catherer
 No. 15 spinal 10 cm with stylet
Ureteral catheter No. 4
One inch adhesive tape
A suitable anesthetic record

Preliminary Injection—

The patient's blood pressure has been recorded. She is in active labor and cervical dilation is progressing. She is placed on her side or in the knee chest position, the latter being easier for the anesthetist, the former easier for patient (either is satisfactory). Sacral landmarks are obtained. The approximate center of a triangle marked out by the sacral hiatus and the two sacral horns are discovered by placing the tip of the index finger on the tip of the coccyx and measuring a point proximally which corresponds to the middle of the proximal phalanx. This distance is about 5 cm or one one-half the length of the caudal needle. Approaching the patient from her left side the thumb of the left hand is used to palpate the sacral hiatus. One bears in mind the manifold

possible anomalies of the anatomy in this region. One possible pitfall is the insertion of the needle through the sacrococcygeal joint into the rectum or even into the baby's head. If such a status is suspicioned it may be ascertained by palpating the needle rectally. In fact if anatomy is too confusing one may palpate rectally the sacrococcygeal joint and use this as a point of reference for the injection externally. Some men routinely develope their orientation by feeling for the sacrococcygeal joint in this manner.

When the hiatus is discovered a 10 cc syringe is filled with 1½% procaine and using a No. 25 hypo needle a skin wheal is made in the center of the hypothetical triangle described above. The No. 20 1½ inch needle is attached and with the shaft at a 45 degree angle with skin the hiatal membrane is sought. Its penetration is accompanied by a slight snap or a sense of "giving." By this token the needle point should be in the sacral canal. The left index finger may be used to guide the needle's course—4 to 6 cc procaine are deposited in the canal and the remainder is deposited during withdrawal of the needle. At this time one must take care to reaspirate the syringe frequently to ascerain no intraspinal or intravascular injection. The No. 20 needle is withdrawn, B. P. registered, and the patient is observed for 10 minutes for possible reaction or idiosyncrasy. The preliminary injection is made without sterile gloves, the only preparation being merthiolate locally and clean hands.

Insertion of the Caudal Needle—

Ten minutes after the preliminary injection, if there have been no signs of untoward reaction and blood pressure remains fairly well stabilized the final injection is begun. The area is reprepared with merthiolate spray and a sterile drape applied. The patient is either on her left side or more preferably in a knee chest position. The anesthetist wears sterile gloves. In a repitition of the preliminary injection the thumb of the left hand is used to seek out the scaral hiatus while the caudal needle (No. 15) is grasped by the thumb and index finger and inserted into the skin at the former wheal site at an angle of 45 degrees bevel up. Penetration of the skin with the large caudal needle is commonly diffienlt and is often accompanied by a snap which frightens the patient. The hiatal membrane is sought and punctured at which time the needle is in the sacral canal. Its shank is depressed to something in the neighborhood of a 20 degree angle with the skin and the needle is passed on into the narrow bony space to a distance of 5 to 7 cm on the needle. Here again the left index finger acts as a guide. The width of the canal as well as its shallowness is quite variable. Gentle A-P manipulation of the needle will usually discover bony anterior and posterior walls if the needle is in the canal. Care must be taken not to penetrate the plexus of veins within the canal which is heralded by a return of blood when the stylet is removed from the needle. In such a case the needle is withdrawn a bit or given a half turn. Atraumatic manipulation is important to prevent venous thrombosis; a fatal case of pulmonary embolism has been traced to sacral vein thrombosis following caudal analgesia. If spinal fluid is aspirated at any time during the technique the entire method is discarded.

The Final Set-up—

When the needle has definitely been placed properly and does not lie subcutaneously or in the rectum its stylet is withdrawn and a patent No. 4 ureteral catheter is threaded into the needle to the 17 to 20 cm mark measured at the hilt of the needle. The needle is now removed being threaded over the catheter. In its removal the catheter withdrawn to the 11 to 15 cm mark as measured at the skin. If the caudal needle was properly placed this procedure is easy.

A No. 20 cannula is fastened to the catheter and the large syringe attached. Gentle suction for a few seconds demonstrates that the sacral veins or subdural space have not been penetrated. If spinal fluid is obtained the technique is discarded. If blood returns the catheter is adjusted until none appears and added care is used lest intravascular injection should occur. Blood pressure is recorded and 30 cc of 1½% procaine is injected. There is usually some resistance to injection partly due to the calibre of the apparatus and partly to the resistance of the sacral canal. The injection is made fairly rapidly. Simultaneously the patient may move her legs slightly, complain of pain or tingling or burning in the legs, or of numbness in the toes. These manifestations are the first effects of the block and

suggest that a successful anesthetic will ensue. Fairly complete anesthesia is obtained within 15 to 20 minutes, the feet, usually cold to labor, become warm due to vasodilation.

The ureteral catheter is now taped to the buttocks and side of the abdomen along with the syringe and the patient is returned to her back.

The relief obtained is quite gratifying in 4 out of 5 cases. In fact it is often so complete that neither the obstetrician nor the patient realizes that the second stage of labor is practically finished until the fact is made known by an interfemoral struggling or a cry. It is for this reason that the entire labor under caudal analgesia must be closely supervised. Often the mother will be vaguely aware of uterine contractions either by feeling her abdomen or when the anesthesia is beginning to wear off. The usual thing is to allow the woman to "come out a bit" before further injections are given. The repeated doses generally 30 cc are given at 60 to 90 minute intervals depending on how fast the patient metabolizes the procaine. Huge total amounts are tolerated.

The blood pressure is recorded at frequent intervals. A drop of 10-15 mm is expected due to vasodilation in the lower extremities. A drop in excess of 20 mm bears careful watching for possible reaction or intraspinal injection. If such a fall in blood pressure occurs ephedrine is given. An oral barbiturate is often given to allay nervousness and to counteract drug reactions.

With the finish of the third stage the method is discontinued. The catheter is removed and the sacral area is painted with collodion. The patient is returned to her room and is expected to recover completely within an hour or two.

Comments—

If the method is successful it is very dramatic. Pain is completely relieved. The first and third stages are shortened and are more nearly ideal. Complete anesthesia and relaxation of the perineum occurs, making possible virtually any obstetrical operation including Caesarean section. This is fortunate since because of no expulsive urge patients often have to have an operative delivery. The second stage is often prolonged. Generally the infants cry lustily at birth in contrast to the blue stuporous babies characteristic of narcotic analgesia. However, last year several workers reported infant toxicity blaimed on the local anesthetic agent used with caudal analgesia.

Variations in technique are many. Originally the method made use of a special malleable needle which has been discarded for the easier ureteral catheter method developed by Lundy. Continuous drip methods have been devised to prevent intraspinal injection and for simplicity's sake. Different minor details have been modified as time goes along but the technique just described which is popular in the middlewestern clinics bids best to survive. Pontocaine, metycaine, and procaine in various concentrations have all been used as anesthetic agents. The latter two seem to have greater favor, procaine being the least toxic and metycaine the more effective.

A number of proven disadvantages aside from those previously implied must be mentioned. Continuous caudal definitely increases the incidence of occiput posterior presentations. Deaths due to sacral infection have been reported. Rarely a permanent paralysis will result. In general, however, the risks and complications compare very favorably with those of the narcotic methods of analgesia especially when infant mortality is considered.

The great value of this method cannot be denied but the trend is for its less widespread use. The complexity and time-consuming feature of the method makes its general use in private practice inconvenient and especially impractical in busy times. Very pointed indications can be seen in instances of heart or lung disease and in cases of premature labors. It is here and in the case of the physician who is specially equipped and who will cautiously select and watch his patients that continuous caudal obstetrical analgesia will probably see its greatest future use.

Much of the information contained in this paper is based on the writer's personal observations at the Mayo Clinic Dept. of Anesthesia and the State University of Iowa Dept. of Obstetrics and Genecology. The technique described herein is a composite of that used at these instutions.

Although having observed and studied this method extensively in two outstanding clinics

in the middlewest, my own personal experience with the method in private practice has been meager.

I have used continuous caudal analgesia in only six obstetrical cases. It was quickly learned that the method is very impractical in war times when hospital personnel, and the physician's time are so much at a premium. The results obtained in this very small sampling are in keeping with statistics at large. Three of the six achieved perfect results. One of these, a multipara, delivered spontaneously; another multipara required low forceps; the third, a multipara, required low forceps. One patient developed incomplete or hemianesthesia. Only one multipara, highly nervous and emotional, proved to be an utter failure. The sixth patient, a multipara, progressed so rapidly that by the time the caudal analgesia had been instituted she had reached the second stage but this and the third stage proceeded very painlessly much to final satisfaction. "Caudal" was attempted on three other multipara but had to abandoned because of a too rapid first stage.

When the method works properly in the case of the multiparous patient who has previously felt the pangs of childbirh, she is invariably enthusiastic. The method should be used on emotionally stable women, who are unlikely to have complications, and who either have specific indications such as heart disease or who are very well acquainted with the principles involved and who specifically ask for it. Many individuals are hesitant to "have the doctors working on the spine." My observations militate against a completely routine use of continuous caudal obstetrical analgesia.

RH HAZARDS IN GENERAL PRACTICE

W. H. OATWAY, Jr., M. D.
Tucson, Arizona

THERE is no doubt that the Rh blood typing was invented to make life more complicated for the doctor and some of his patients. It also seems, on first inspection, to be a remote and obscure procedure from which no good can possibly arise.

However, the hazards which can result from not knowing about the Rh status of a patient are definite, and are not restricted to big city hospitals nor the records of research hematologists. Prevention of these hazards depends chiefly on an understanding of certain facts which have been gathered together in the past few years, and an expansion of laboratory blood grouping methods.

* * *

A case which typifies one of the hazards is presented here, preceded by a brief outline of the mechanism by which such conditions are produced.

* * *

It was discovered in 1940 that, in addition to the conventional blood groups, all individuals could be further subdivided into two groups according to the presence or absence of a certain antigenic substance in the red blood cells. Those in which the substance was present were said to be Rh positive (+); those who did not react were Rh negative (—). The "Rh" label came from "rhesus," since the reaction was first observed when blood from that type of monkey was injected into rabbits to produce a serum. The serum was used to demonstrate the antigen in humans. About 85% of humans are Rh positive and 15% Rh negative. There are even less negative reactors in colored and oriental individuals. (Most of the immunology has been done by Landsteiner and Wiener, and Philip Levine and co-workers. They have found other subgroupings which have no direct bearing on Rh syndrome, and will not be mentioned.)

The first clinical application of his information was in *erythroblastosis foetalis*. It was found that the mothers were almost always Rh negative, the infants and fathers were Rh positive. The mothers were usually multiparas, with one or two normal children. They then gave birth to a child with erythroblastosis, and all later pregnancies were similarly complicated. (Erythroblastosis often masquerades as "anemia of the newborn," or "hydrops foetalis," or "icterus gravis neonatorum.") It seemed possible that the early pregnancies conditioned the mother in some way which eventually produced a change in the foetus in utero.

This was later proven so: the Rh positive foetus produced anti-Rh antibodies in the mother; the maturation of red blood cells was inhibited; the foetus attempted to compensate by erythropoiesis outside of the marrow; and hemolysis often occurred. The antibodies of the mother can be of the agglutinating or of the blocking type. The latter is the more serious. The titer of antibodies, and the duration of exposure of the foetus to them, are factors in prognosis.

A more recent correlation has been in the explanation of certain *transfusion reactions.* Reactions of increasing severity have been noted in patients whose ordinary grouping and cross-matching were known to be perfect. It was found, upon testing for the Rh factor, that many of the recipients were Rh negative, that they had received previous transfusions, and that the donors were Rh positive. The early transfusions had produced anti-Rh antibodies which eventually resulted in violent hemolytic reactions.

It is also possible that sensitizing a woman by transfusions may be a short-cut to the production of erythroblastosis if she later becomes pregnant.

Both methods of isoimmunization (transfusion and an Rh positive foetus) are similar in their immunological end-result.

* * *

CASE REPORT: The patient is a white female aged 37, first seen in 1943. She had a very complicated condition, which on complete examination could be listed as follows:

1. Generalized subacute rheumatoid arthritis.
2. Chronic purulent generalized sinusitis, with bilateral antral windows.
3. Chronic purulent bronchitis.
4. Nephrectomy, left; nephroptosis, right, (kidney palpable at the anterior abdominal wall.)
5. Early mild hypertension.
6. Drug sensitivity (codeine, aspirin, phenobarbital.)
7. Aversion to medicines (iron, liver extract, etc.), and to most foods.
8. Secondary hypochromic anemia (3.5 to 3.7 million RBC; 65% to 70% hemoglobin.)
9. Undernutrition.

During the course of the winter the anemia worsened about 10%. She was sent to a hospital for transfusion, since at the time of the last previous transfusion, she had had a "bad reaction."

The transfusion was followed by a chill, fever, malaise, and a mental condition. In spite of special nursing she tilted off the bed while trying to get up and broke a leg at the neck of the femur. This was perfectly pinned a few days later, but the blood count had again dropped, and another transfusion seemed indicated.

It was decided to obtain blood, do a plasmapharesis, and then infuse the red cells suspended in saline. This was done, and the patient had almost no reaction (fever of 99 degrees).

An Rh test was made at that time and she was found to be Rh negative. Another transfusion was needed a few weeks later, and an Rh negative donor was sought for but not found.

It is notable that only a year and a half ago there was no Rh classification on the donor list, and scanty emphasis was laid on the importance of this patient's negative Rh reaction by the clinicians. It was thought that another plasmapharesis transfusion would suffice.

The transfusion was given and it almost resulted in death. The patient had a severe chill, fever, and disorientation. An anuria occurred and persisted for 16 hours, followed by dark red urine for 24 hours, and jaundice for a week. The blood pressure became elevated 30 mm., the kidney became swollen and tender, and symptoms of headache, vertigo, and nausea were present. Fluids were given intravenously, and she was given cardiac supportive treatment. The syndrome gradually subsided in 10 days, with the blood pressure lowering slowly during the next few months.

* * *

DISCUSSION: The probable explanation of the occurrences in this case is simple: The patient was an Rh negative reactor; previous transfusions had sensitized her to Rh positive blood; she had reactions of progressing severity to transfusions; the transfusion without reaction was possibly Rh negative blood; and the final hemolytic reaction was the result of the cumulative sensitizations.

The patient may be given Rh negative blood with safety. The plasmaphareses were a waste of time, and a delusion, since the red cells contained the harmful factor. A pregnancy is im-

probable, but would be hazardous to the foetus in this case because, though she had had none previously, she has been sensitized by transfusion.

There is no evidence that her other ailments are connected to the blood condition except as aggravating factors.

A general testing of all donors and recipients for the Rh factor will probably be routine in the future. It should prevent the development of sensitization and its hazards in many cases. Within the past months, anti-Rh testing sera have become widely available. A routine testing of all pregnant mothers for the Rh factor should be done, and all negative reactors should be tested for the antibodies.

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Editorials

The Council On Medical Service And Public Relations

The AMA Council on Medical Service and Public Relations held a meeting at the AMA headquarters in Chicago, October 19 and 20. Representatives from each State Medical Association were invited and many of the states accepted the invitation. The meeting was unique, in that the list of subjects were presented at 8 different round table discussions on the first day. At the end of the day resolutions were drawn up and presented to the general session on the morning of the second day. The Council was brought up to date on the present status of proposed legislation in the national capital. The Murray-Wagner-Dingall Bill which every one knows about and is interested in, rests in the Senate Ways and Means Committee. This committee has employed a group of experts to evaluate the financial possibilities of the bill. When the bill was introduced it was estimated that the levy of 4% on the employer and 4% on the employee would raise about 3 billion dollars a year. These experts have estimated that it would cost between 15 and 17 billions a year to carry out the provisions of proposed legislation. It is the opinion of the Washington office of the Council that no action will be taken on the bill at this session of Congress.

The Hill-Burton Bill is the next important piece of Federal Legislation at this time. This is a bill to authorize grants to the States for surveying their hospitals and public health centers and for planning construction of additional facilities, and to authorize grants to assist in such construction. This bill is considered constructive legislation and if passed as it is originally proposed will be approved by the AMA. It sets up a State Advisory Council to make the survey and after the survey is completed any non-profit hospital, either public or private, is eligible to secure grants for construction. These grants will be outright and the hospitals will remain autonomous. Considerable doubt exists at this time as to whether these grants will be made to private institutions without some strings attached by the Federal government. Hearings have been held on the bill but it has not been reported out of committee.

A department which is receiving much favorable comment in Washington is the Office of Scientific Research and Development. This office was established by the late President Roosevelt, who appointed Dr. Vannevar Bush as director. Dr. Bush has presented a report on national policy. He points out that the cost of scientific research is too great to be carried out by private sources. He suggests that the government give financial support through outright grants to medical schools and universities for research and fellowships. A tentative figure for this program would be 33 million dollars the first year and would increase to 122 million by the fifth year. The Magnuson and Kilgore bills before Congress would deal with this legislation.

Maternal Care

While it seems at this time that the Wagner-Murray-Dingall Bill is stimied in Congress, there is grave danger of this proposed legislation being enacted piecemeal. When the Emergency Maternal and Infant Care Program was instituted in 1942 it was to end 6 months after the end of the emergency was declared. The medical profession predicted that its use merely a foot in the door for main socialization of medicine. In July of this year Pepper introduced S1318. This is the most dangerous and vicious bit of legislation before our national legislature. It is entitled "Maternal and Child Health Services." It would appropriate 50 million dollars the first year, and a sufficient sum each year thereafter to carry out the provisions of the bill.

Controversial Discussions

This section of the program brought the Council up to date on the status of national affairs and national legislation. The other round table discussions involved subjects which were much more controversial in character. They included Public Relations, Press and Radio programs, the E. M. I. C. program, Placement of Medical Officers, Medical Service Plans and their co-ordination with the Blue Cross. The problems involved in the latter subject consumed most of the afternoon of the first day.

While not many answers were reached concerning all these subjects, resolutions were drawn up at all the round tables and presented at the General Session on the morning of the second day.

The General Session decided to call another meeting of the Council on Dec. 2, the day before the AMA House of Delegates meet in Chicago, at which time they hope to have some very definite recommendations to make to the House. The various state representatives at the meeting were very favorably impressed by the frankness and sincerity of the Chairman of the Council, Dr. E. J. McCormick. He approached all problems with an open mind, and insisted that definite conclusions be reached and aggressive action be taken. It would seem that if frequent meetings, similar to this one, of this Council are held, a constructive policy for the American Medical Society will be formulated.

A Tribute To A Country Doctor

Spanish has a word for it—"Simpatico," simple, kind, human true. Perhaps you would be in Mexico on a fishing trip, and they would find you were from "Ah, Buckeye, eh? Como esta mi amigo, el Doctor? Que buen hombre es, que simpatico." They all loved him down there. Or perhaps you would be knocking around over most any part of the State; it would be, "How is my old friend the Doctor?"

Children loved him, children liked to be aroond him, and flowers liked to grow for him. Just now, in passing his home we saw a woman picking flowers from a vine he had planted.

And the dogs. He could walk along anywhere and if there were as many as three dogs in the neighborhood there would be three dogs following along by the time he got home.

He used to say that he had three things to be thankful for, three things at least. One that he was born white, two that he was born an American and three that he was republican in politics. Yet, white, black or in between we all looked alike to him and we all had the same good treatment from him. Also he would vote the other way as often as not.

Sometimes he would put on his good clothes and come down the street looking the cosmopolite he was, yet a stranger would not hesitate to ask him a local direction. That was how he was; he simply belonged and all could see it. He delighted in our simple pleasures as well as mourning with us in our misfortunes. We remember when he was being introduced by our Mayor at a local celebration, and the mayor described him as the best loved man in West Maricopa County. We wondered then why such narrow limits were set.

He was a good sportsman, a good man to know, a very fine gentleman and a friend.

There are Alice, the wife; Kenneth, Genevieve, Roland and Paul, the children; George, Roland, Jr., and Pamela, the grandchildren. There is too the whole community. Of course we loved him, because you see, he loved us.

Buckeye News.

The Journal of Venereal Disease Information

Syphilis in Inductees. Analysis of 5,000 Cases. Jacob Zellermayer. Journal of Venereal Disease Information, Washington 26: 194-196 December, 1945.

A study evaluating the preliminary diagnoses of syphilis in a group of 5,000 inductees revealed that 11.4 percent of these inductees never had syphilis, 10.56 percent were possibly cured of their infection, 1.24 percent had primary syphilis, 0.14 percent secondary, 48.84

percent early latent, and 12.98 percent complicated syphilis, chiefly cerebrospinal.

Preliminary diagnoses were based on positive serologic tests, history of injection on therapy, history of penile or skin lesions, familial histories of syphilis, and miscellaneous other reasons.

In 1,510 inductees in which no evidence of active infection could be found at the time of evaluation, 37.7 percent were found never to have had syphilis, 35.0 percent had been adequately treated and were possible cures, and 27.3 percent had been inadequately treated or treated within the previous 6 months and were considered possible cases of latent infection.

In 570 men finally evaluated as never having had syphilis, positive serologic tests alone comprised the basis for the preliminary diagnosis of nearly 80 percent; a history of penile lesion, 16.0 percent; a history of injection therapy, 1.6 percent; miscellaneous other reasons, 2.8 percent, such as a doubtful positive Romberg, the presence or history of skin lesions or adenitis and familial histories of syphilis.

This group, found never to have had syphilis, is an excellent illustration of the necessity for careful diagnostic work in the field of syphilotherapy. It constitutes 11.4 percent of the entire series, and contains 570 men who might well have been started on an arduous course of treatment in the absence of further investigation. It also raises considerable doubt concerning 167 men in the cured group who had been treated on the basis of positive serologically negatives but had had inadequate treatment. All of these facts emphasize the need for great care in establishing the diagnosis of syphilis.

Of the 528 men (10.56 percent) considered possible cures, 167 were originally diagnosed on the basis of serologic tests alone, so many of them may never have had syphilis. On the other hand, there were 412 men clinically and serologically negative who were classed as latent syphilis either because they had received inadequate treatment or because they had been receiving treatment within 6 months prior to evaluation. Thus there was a total of 940 men, 18.8 percent of the entire series, who, if their original diagnoses was correct, may have been cured; 84.1 percent of these had had more than 20 arsenical injections. Nearly half of the possibly cured cases had received regular treatment compared with slightly over one-third of the latent cases. Even when those who had received less than 20 arsenical injections are taken out of the latent group, the remainder show a much lower average number of injections than do the possible cures. It is apparent that both regularity and amount of treatment are potent factors in bringing about serologic reversals.

No previous treatment had been given to 1,614 inductees with latent syphilis. This group constitutes 58.2 percent of the 2,772 seropositive latent cases. In other words, well over half of this group found to have positive blood tests but no other signs of syphilis were previously untreated and unknown cases. This illustrates the value of the serologic survey in finding cases of syphilis, provided caution is used and too much reliance is not placed on the results of a single test.

From the Office of Surgeon General

FACTS ON USE OF DDT

Since the proper use of DDT requires special knowledge and training, a bulletin has been published as a technical guide for the Army to its safe and efficient use, Major General Norman T. Kirk, Surgeon General of the Army, announced today. The publication contains information on the precautions to be taken in handling DDT, its mode of action in insect control, and the proper methods of application of the DDT insecticide items issued by the Army.

It is emphasized that, although DDT may be safely handled as an insecticide, it is, nevertheless, a toxic material. Poisoning may occur from ingestion of DDT or by absorption of DDT solutions through the skin. DDT powder and aerosols are not absorbed through the skin, and have been found to produce no ill effects when inhaled in small amounts. However, in conditions where air currents do not carry away the dust from the user, it is wise to wear suitable respirators as protection against excessive inhalation.

DDT acts on insects both as a contact poison and as a stomach poison. Studies have shown that the poisonous effect of DDT on mosquito larvae is fully as powerful as that on the adult insect, although on some other insects, such as

flies, the larvae are not equally affected by the insecticide. In applying DDT as a mosquito larvicide to open water receptacles, a prolonged effect may be obtained because of the residual action of the chemical. However, in applying it to natural water bodies the effect is much shorter, due to the binding action of mud in the water, which apparently checks the effectiveness of DDT. It should also be considered that amounts of DDT greater than 0.2 pound per acre may prove fatal to fish and wild life. For extermination of insects such as ants, roaches, fleas, bedbugs and flies, DDT oil solution or powder should be used, with particular attention to cracks, holes, and seams in walls, floors, and bedding, as indicated. One of the most valuable characteristics of DDT lies in its tendency to remain deadly to insects over a prolonged period of time. In applying DDT solutions to walls and other large surface areas, a course spray is usually employed, but in applying it to screens or mesh surfaces, ordinary paint brushes may be used. Although the effectiveness of the treated areas against insects persists for some time, the insects which come in contact with the chemical may not die until an hour or more has elapsed, and immediate death should not be expected.

When applying solutions of DDT in kerosene, precautions concerning the inflammability of the kerosene should be observed. Care should be taken to keep electric motors and other sparking or heating apparatus from the zone of spray. No open fires or smoking should be permitted until the spray has dried and ventilation is complete. The kerosene in the solution is harmful to rubber equipment and may cause a mild skin irritation when in contact with the skin.

Thanks to the magic properties of DDT, many lives have been saved in this war and much disease prevented. Extermination of disease-carrying insects has reduced the incidence of typhus, malaria, and other ravaging diseases of the war areas.

Although rapid progress has been made in the development of DDT since it first made its appearance in the field of science, much remains to be learned before its full potentialities in insect control can be realized. Signs of progress are evident in the spraying of large areas by aircraft, the mass delousing of communities in Europe, and the better methods of manufacture. Investigation is continuing on every aspect of DDT, however, in search of new and extensive improvements in everything from its chemical beginning to its final application in the field.

New Delousing Sets for Overseas Use

More than 400 compact power-driven delousing sets, weighing only 180 pounds, but capable of dusting 600 persons an hour with DDT powder, have been put in operation overseas, according to a recent announcement by the Office of the Surgeon General.

The disruption of sanitary facilities in battle areas has promoted rapid breeding of disease-bearing vermin to such an extent that the situation requires prompt action to avoid epidemics.

Each individual to be treated must be dusted up the sleeves, down the neck, and inside the waist band with approximately 1½ ounces of DDT powder. This is a slow process with a hand duster, but the new delousing outfit, having ten hoses and nozzles, permits the rapid handling of ten persons at a time and is proving invaluable in holding disease in check in infected areas.

The delousing outfit was developed by the Quartermaster Corps in collaboration with the Office of the Surgeon General and the United States of America Typhus Commission.

NEW SKIN DISEASE—ATYPICAL LICHEN PLANUS—ANNOUNCED

Studies of the occurrence of a new skin disease, which has been named atypical lichen planus and is known to the soldier as one of the varities of "jungle rot," were recently announced by the Office of the Surgeon General.

Following the first Pacific island invasions, it became necessary to evacuate a growing percentage of men from battle areas of skin diseases which are common in the tropics. Soon after the beginning of the Buna campaign in early 1943, a number of patients with a similar skin disease which was unfamiliar was noted. Further observation made it evident that a new disease was being encountered.

The first Army reports containing descriptions of this new disease, which came to be called atypical lichen planus, were submitted by two Army dermatologists in the Southwest Pacific—Major Thomas Nisbet of Pasadena,

California, and Lt. Colonel Charles Schmitt of Pittsburgh, Pennsylvania. Major Nisbet and Colonel Schmitt believed that atabrine, the drug which proved of such excepnional aid in reducing malarial attacks, was probably the underlying cause of the disease.

Army doctors emphasize that the possible relationship of atabrine to atypical lichen planus does not reflect upon the usefulness of atabrine for the treatment of malaria. The skin disease has appeared only in about 2 or 3 per thousand of those in the Southwest Pacific who took atabrine regularly for some months. Atypical lichen planus apparently arises partly because of an unusual sensitivity to atabrine. Doctors are well acquainted with the fact that occasional individuals are sensitive to certain drugs such as quinine, the sulfa drugs, and even aspirin.

Although medical officers believe that atabrine is an underlying cause of the disease, they recognize that many other factors besides atabrine are probably contributory. These include skin injuries and irritations of many kinds, excessive exposure to sunlight, profuse perspiration, dietary deficiencies, and emotional and nervous factors. Older men have been found to be more susceptible than younger men, and the disease occurs among the nurses and WAC's as well as among the men.

Medical officers soon learned to recognize atypical lichen planus in its early stages and are able to prevent it from spreading to other parts of the body. In all but a small percentage of cases the disease has cleared up under treatment. To relieve the public and the families of patients of unnecessary worry, Army doctors emphasize that atypical lichen planus is not contagious.

Atypical lichen planus gets its name from its resemblance to the well-known skin disease, lichen planus. The type of skin lesions in the disease differs with the patient. The disease usually first occurs in itchy, oozing, reddish or purplish patches on the skin. These patches may remain the same for several weeks or they may spread rapidly. Some patients develop a later stage in which raised scaly patches appear, often on the arms and legs.

Following the acute stage of the disease, the inflamed patches leave purplish or brownish areas and often cause a temporary closure of sweat glands with a consequent lowered heat tolerance. In some cases patches of hair are temporarily lost.

Special mention should be made of some of the many medical officers in addition to Major Nisbet and Lt. Colonel Schmitt who have been carrying on scientific studies of this skin disease. Lt. Colonel John Ambler of Denver, Colorado, Consultant in Dermatology in the Southwest Pacific, collected extensive information on the many aspects of the disease; Major Abner M. Harvey of Nashville, Tennessee, and his associates contributed to the impression that atabrine was an essential cause; and Major Lawrence Katzenstein of Baltimore, Maryland, made some of the early observations of the disease.

TOTAL STREPTOMYCIN PRODUCTION ONLY FOURTEEN OUNCES A MONTH

The War Department said today that streptomycin, the new wonder sister drug to penicillin, was being used in thirty Army general hospitals over the country, but that it was so difficult to obtain that the total output of the four companies now making it has been only fourteen ounces a month.

Major General Norman T. Kirk, Surgeon General of the Army, said the Army was receiving many requests for the drug for use in treatment of urinary and other infections caused by gram-negative bacteria which do not respond to penicillin, but that these cannot be met since the Army neither controls the supply nor can get enough for its own needs in treatment of battle-wounded soldiers.

General Kirk said that the four companies, Merck, Upjohn, Abbott and Squibb, were the principal manufacturers of the new product, but that other concerns were working at experimental production at pilot plants and that any civilian request for streptomycin naturally would go to these companies.

"The Army and Navy are purchasing only a part of available production," General Kirk said. "In August, twenty-eight ounces—or 800,000,000 units—were purchased. Joint Army-Navy expectations for September are 162 ounces, but it is anticipated that production will be not more than 70 ounces. It is hoped that Army-Navy procurement can be doubled in October—for military needs alone now are about 2,000 ounces a month."

A gram, or 1,000,000 units is the standard

daily dose administered in three injections over a twenty-four hour period.

Production is limited severely because the drug is obtained from a natural fungus found in the soil and must be grown under carefully controlled laboratory conditions which cannot be hurried.

The phenomenal production of penicillin which brought it from a laboratory curiosity to a commonly-used drug and the price from astronomical figures to about a dollar a dose was due in part to pressure of wartime needs, the General pointed out.

"But," he added, "with the war ended and priorities a thing of the past, streptomycin does not have these advantages, thus working to some extent to hamper production, although industry is doing what it can do to supply the demand."

General Kirk explained that the Army's principal needs are for treatment of soldiers with severed spinal cords who develop urinary tract infections because of a loss of bladder function, and to some extent in treating some cases of meningitis and other infections which do not respond readily to penicillin therapy.

SIX PROJECTS FOR IMPROVEMENT OF ARTIFICIAL LIMBS

An intensified program for the improvement of artificial limbs which involves six separate projects will be undertaken by the Army in co-ordination with the National Research Council, according to an announcement by Major General Norman T. Kirk, Surgeon General of the Army.

In February of this year the National Research Council through its committee on Prosthetic Devices, which comprises some of the country's outstanding scientists, started work on the problem of providing better arms and legs for amputees. Co-operating with this committee are the Veterans Administration, Navy, Army, National Bureau of Standards, Federal Security Agency and engineers from some of the nation's top industrial concerns.

The research activities of the Committee on Prosthetic Devices will continue along the same lines but the Army will give further co-operation in certain additional phases of the program. The plan of Army scientists is to complement what is being carried on under the National Research Council auspices.

The Army will conduct its research work at Army General Hospitals which are amputation centers. The presence in these hospitals of orthopedic surgeons who are handling these amputation cases and the clinical evaluation possible under such circumstances is expected to prove of definite value.

The aim of both projects is the general improvement in the quality of artificial limbs, more standardization of parts and the facilitation of production and fitting.

The six phases of the program in which the Army will devote its efforts include:

1. Further development and improvement of knee assembly and ankle assembly.
2. Investigation of materials for producing a cosmetic hand or for covering a mechanical hand.
3. Evaluation of usefulness of plastics in sockets or limb sections.
4. Broad study of metals and alloys used in fabrication of artificial limbs.
5. Investigation of fabrics and techniques of manufacture and fitting for prostheses at or below the ankle.
6. Production of a motion picture record of the Army amputation and prosthetic program.

Private industry will play an important part in this program. The Committee on Prosthetic Services of the National Research Council contracts with individual concerns for basic research which is carried on in the laboratories of the company contracted.

Northrup Aviation Company in California has done an outstanding piece of work in the improvement of a rotary wrist mechanism which gives an arm amputee far better use of the artificial hand. This work has been done in collaboration with Bushnell General Hospital at Brigham City, Utah.

The government authorizes payment for all expenses under these contracts and the Army through its amputation centers will afford every possible means of co-operation.

The War Department hopes to broaden this aspect of the project by enlisting the help of more industrial concerns which have the laboratory facilities to engage in such work.

An appropriation has been authorized sufficient to continue this Army project as long as the Surgeon General expects to have amputee cases in Army General Hospitals. There have been about 14,000 amputees in Army General

Hospitals in this country since the beginning of this war. Of this total there are now about 8,300 amputatees who are in the six amputation centers in Army General Hospitals.

Five percent of these cases represent battle veterans who have two arms or legs or one arm and one leg, nine are triple amputees and only two men have lost both hands and both feet. Approximately 95 percent are men who have suffered the loss of one limb.

GENERAL RANKIN IN TALK TO THE UNIVERSITY OF MICHIGAN ON WORK OF ARMY SURGEONS

A major factor in the Army's record of saving the lives of almost ninety-seven out of every hundred wounded men who reached a hospital was the quality of surgical care given these soldiers, Brigadier General Fred W. Rankin, Chief Consultant in Surgery of the Army Medical Department, told the graduating class of ASTP and V-12 students at the University of Michigan School of Medicine on September 15 at Ann Arbor, Michigan.

The lowered mortality rate in this war also was achieved because the highly qualified surgeons did their work without loss of time and also because hospital facilities staffed by specialists were placed near the front.

General Rankin said the average wounded man received his initial surgery at an evacuation hospital within ten hours of the time of his injury.

"In carefully selected cases," General Rankin added, "in which surgery was done at field hospitals the average time lapse was considerably less."

The efficient operation of the Army chain of evacuation made this possible. It starts at the time a man is wounded, and it is usually only a matter of a few minutes before the Medical Corpsman gives emergency treatment.

General Rankin explained that the Army's accomplishments were possible partly because of the method of assigning qualified specialists and also to the dissemination of information through the Consultants Division as to the best methods to be used under certain circumstances.

"The general principles of wound management were two-fold; initial debridement and delayed wound closure," the General continued. "The use of this method in the Mediterranean Theater of Operations resulted in primary healing in 95 per cent of the cases in which it was used and was attended with no loss of life or limb and with no serious complications."

Improved techniques reversed the ration of deaths and survivals in abdominal injuries as compared with that of the last war. About sixty per cent of the casualties in the last war were fatal, while in this war sixty per cent of such casualties survived.

The so-called early nerve suture resulted in regeneration in eighty-five per cent of the cases in this war, according to the General. Another notable accomplishment in this war has been the reduction in the mortality rate in the dangerous cases, or the head, chest and abdomen wounds, which is only half as high as during the last war.

Reconstructive and rehabilitative surgery designed to correct the disfiguring consequences of battle wounds is achieving results "that can fairly be termed miraculous," General Rankin said.

NEUROPSYCHIATRIC DISCHARGES IN ARMY NOW TOTAL 315,000

The nation's total of soldiers who have been discharged from the Army for neuropsychiatric reasons has now reached 315,000, Brigadier General William C. Menninger, Director of the Neuropsychiatry Consultants Division at the Army Medical Department, said in a recent talk before the New York Academy of Medicine.

Describing this problem as a "post war challenge to medicine," General Menninger expressed the hope that "physicians will prepare themselves to accept and treat what the Army medical officers discovered were among their biggest problems—the emotional factors in the production of illness."

"With this understanding on the part of the physician," General Menninger said, "treatment must be directed towards integrating the individual into his pre-war identifications and satisfactions."

On the basis of the Army's experience with neuropsychiatric cases, which are referred to as combat exhaustion or combat fatigue, only about three to five per cent of the soldiers suffered reactions due entirely to fatigue. The condition of the great majority was primarily

a personality disturbance and treated as such, he explained.

Upon induction into the Army a soldier faces an entirely different life which in certain cases produces sufficient stress in the individual to bring him to the psychiatric breaking point.

"Frustration," he pointed out, "was a daily part of the soldier's life, sometimes in the form of waiting days, weeks, months, sometimes in the deprivation of essential supplies.

Confusion was routine in his life and the noise and whistles and flares of battle are beyond the imagination of anyone who has not heard and seen them."

General Menninger said that essentially the response is the same when an individual fails to adjust himself to his situation in civilian life as it is when he finds he cannot meet the demands of Army life.

EXCERPTS FROM THE WORKMAN'S COMPENSATION LAW

The following is Section 56-957 of the Workmen's Compensation Law, outlining scheduled injuries under Sub-section (b) and general disability under Sub-sections (c) and (d):

"Sec. 56-957. Partial Disability. (a) For temporary partial disability there shall be paid during the period thereof, not to exceed sixty months, sixty-five per cent of the difference between the wages earned before the injury and the wages which the injured person is able to earn thereafter.

(b) Disability shall be deemed permanent partial disability if caused by any of the following specified injuries, and compensation of fifty-five per cent of the average monthly wage of the injured employee, in addition to the compensation for temporary total disability, shall be paid for the period given in the following schedule:

1. For the loss of a thumb, fifteen months.
2. For the loss of a first finger, commonly called the index finger, nine months.
3. For the loss of a second finger, seven months.
4. For the loss of a third finger, five months.
5. For the loss of the fourth finger, commonly called the little finger, four months.
6. For the loss of a distal or second phalange of the thumb or the distal or third phalange of the first, second, third, or fourth finger, shall be considered equal to the loss of one-half of such thumb or finger, and compensation shall be one-half of the amount specified for the loss of the entire thumb or finger.
7. The loss of more than one phalange of the thumb or finger shall be considered as the loss of the entire finger or thumb, but in no case shall the amount received for more than one finger exceed the amount provided for the loss of a hand.
8. For the loss of a great toe, seven months.
9. For the loss of a toe other than the great toe, two and one-half months.
10. The loss of the first phalange of any toe shall be considered equal to the loss of one-half of such toe and compensation shall be one-half of the amount for one toe.
11. The loss of more than one phalange shall be considered as the loss of the entire toe.
12. For the loss of a major hand, fifty months, or of a minor hand, forty months.
13. For the loss of a major arm, sixty months, or of a minor arm, fifty months.
14. For the loss of a foot, forty months.
15. For the loss of a leg, fifty months.
16. For the loss of an eye by enucleation. thirty months.
17. For the permanent and complete loss of sight in one eye without enucleation, twenty-five months.
18. For permanent and complete loss of hearing in one ear, twenty months.
19. For permanent and complete loss of hearing in both ears, sixty months.
20. The permanent and complete loss of the use of a finger, toe, arm, hand, foot or leg may be deemed the same as the loss of any such member by separation.
21. For the partial loss of use of a finger, toe, arm, hand, foot, leg or partial loss of sight or hearing, fifty per cent of the average monthly wage, during that proportion of the number of months in the foregoing schedule provided for the complete loss of use of such member, or complete loss of sight or hearing, which the partial loss of use thereof bears to the total loss of use of such member or total loss of sight or hearing.
22. For permanent disfigurment about the head or face, which shall include injury to or loss of teeth, the Commission may allow such sum for compensation thereof as it may deem just, in accordance with the proof submitted, for a period not to exceed eighteen months.

(c) In cases not enumerated in subsection (b), where the injury causes partial disability for work the employee shall receive, during such disability, compensation equal to fifty-five per cent of the difference between his average monthly wages before the accident and the monthly wages he is able to earn thereafter, but the payment shall not continue after the disability ends, or the death of the injured person, and in case the partial disability begins after a period of total disability, the period of total disability shall be deducted from such total period of compensation.

(d) In determining the percentage of disability, consideration shall be given, among

other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, and the age of the employee at the time of the injury. In case there is a previous disability, as the loss of one eye, one hand, one foot, or otherwise, the percentage of disability for a subsequent injury shall be determined by computing the percentage of the entire disability and deducting therefrom the percentage of the previous disability as it existed at the time of the subsequent injury.

(e) The commission may adopt a schedule for rating permanent disability and reasonable and proper rules to carry out the provisions of this section. (R. C. 1928, § 1438e, as added by Laws 1939, c h. 28 § 11, p. 53)."

A claimant with a back injury whose injury has been prolonged for a period of, let us say, 9 months, or a year, or more, usually needs a period of time for reconditioning himself in order to be able to return to light work or to resume his usual employment. Therefore, the attending physician sends in claimant's Form No. C-413 on the 10th day of the month that he is totally disabled, and possibly on the 11th or on the 16th, the man is brought before a consulting board, of which his attending physician is a member, and the board makes a report saying that the claimant's condition is stationary and he needs no further medical treatment and is able to return to light work or his usual work. When the Commission receives this report, the question which undoubtedly would arise is, "If claimant was totally disabled on the 10th of the month, and was then examined by a consulting board on the 11th or 16th, how could his condition change so rapidly, allowing him to return to work?"

Whereas, if the attending physician signed his report on the 10th and the claimant was then brought before the board on the 16th, and the board found that he was ready to return to light work, but should have a period of 3 to 6 months in which to condition himself in order to be able to resume his regular work, then this type of report would put the Commission in a position to issue a temporary partial award, based upon the consult board's report allowing claimant this reconditioning period. However, if the consultant board says that claimant's condition is stationary and needs no further medical treatment, then the Commission has no authority to put him on a temporary partial basis for a period of 3 months or so during which time claimant could get himself into a position to resume work.

If the consulting board would say that the man was ready to return to light work but should be given a readjustment period of 3 or 6 months, at the end of which period he should again be brought before the board for examination, it would be an enormous help to the Commission in getting many of the general disability cases back to work more promptly.

THE RADIUM TREATMENT OF HYPERPLASTIC LYMPHOID TISSUE IN THE NASOPHARYNX

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In previous communications (1), (2), the author has endeavored to stress the importance of the use of radium in the treatment of hyperplastic lymphoid tissue located in the nasopharynx.

Infection and hyperplasia in the nasopharyngeal lymphoid tissue is of such great importance as an etiological factor in systematic disease, that it should warrant our most careful attention and consideration. This tissue plays an exceedingly important role in otolaryngology as it most certainly is the primary focus for pyogenic infections occurring in the upper air passages. Primary infections in this tissue extend to the sinuses, ears, larynx, trachea and bronchi; producing, in uncontrolled cases, otitis media, mastoiditis, deafness, chronic bronchitis, and bronchial asthma.

It has been conclusively proven by Heinlke[3] and Akaiwa and Takeshima[4] that the lymphoid tissue is exceedingly sensitive to radiation, and marked reduction in its size can be produced by this method of therapy.

Dr. S. J. Crowe and his associates, working in the Johns Hopkins Hospital, have found radium so valuable in reducing the size of hyperplastic nasopharyngeal lymphoid tissue, that this method of therapy is now used routinely as an adjunct in the treatment of mouth breathing, recurrent nasopharyngitis, impairment of hearing due to tubotympanic catarrah, suppuration of the ears, infection of the accessory nasal sinuses and asthmatic bronchitis. They found, in studying 1365 school children between the ages of 8 and 13 years, that more than 75% had a marked recurrence of the lymphoid tissue in the nasopharynx following tonsilectomy and adenoidectomy. I would like to stress that this was not due to an incomplete operation, but to the fact that the lymphoid tissue is an integral part of the mucous membrane, and thus cannot be removed entirely by surgical means[5].

Repeated infections of the upper respiratory tract result in hyperplasia of the lymphoid tissue. This produces excessive secretion of mucous obstruction to breathing and the eustachian tubes, and the persistent lowering of resistance of the patient to infections. In older children this results

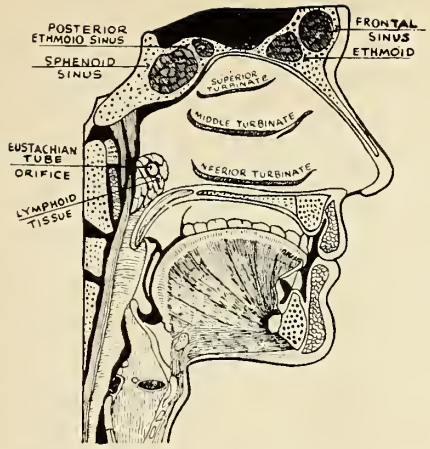


Figure I—Saggital section of head showing in a rough manner the approximate location of the nasopharyngeal lymphoid tissue, and its relation to the eustachian tube orifice.

in the so-called "granular pharyngitis," and continued infection in this tissue produces the commonly recurring nasopharyngitis and pharyngitis seen in adults. Long standing partial or complete obstruction of the eustachian tubes is the commonest cause of conduction deafness. Therefore, it behooves us to keep in mind the facts proven by the above mentioned investigators and treat this nasopharyngeal lymphoid tissue by means of irradiation as often as necessary to cause its atrophy and obliteration.

Crowe states, "Infected and hypertrophied adenoid tissue should always be removed surgically. The combination of operation and irradiation, or irradiation alone, prevents recurrences or reduces the size and susceptibility to infection of the recurrent nodules of lymphoid tissue in the nasopharynx and pharynx. If radiation is employed, the otolaryngologist must realize that it does not destroy or permanently remove the adenoid tissue. It merely slows up, or for a time stops the reproduction of lymphocytes and in this way causes a gradual decrease in size. Usually two or three treatments are necessary to obtain the desired results, and they may have to be repeated once or twice each year until a child reaches the age of puberty. After this period there is a spontaneous regression of lymphoid tissue in the upper air passages in most children"[5]. However, it has been the authors observation that lymphoid tissue in the nasopharynx and pharynx, untreated by irradiation during childhood, persists in the adult; as he has observed several hundred adults who have undergone tonsilectomy under local anaesthetic to have a huge mass of persistent nasopharyngeal lymphoid tissue completely obstructing the eustachian tube orifices and filling the nasopharynx. This observation should not keep one from performing tonsilectomy under local anaesthetic where indicated, but should remind us that there is nasopharyngeal lymphoid tissue still intact which should receive radiation therapy, as it is a persistent site of infection.

During the past five years, the writer has examined with the electric nasopharyngoscope, and treated with radium, over 1000 patients whose nasopharynx and pharynx harboured hyperplastic and infected lymphoid tissue. Over one half of these patients were originally treated with a 50 mgm. radium applicator. The applicator had a platinum capsule 0.5 mm. in thickness. The capsule was attached to a copper wire 17.5 cm. in length. The capsule and wire were covered with a coating of gum rubber 0.7 mm. in thickness. Recently a new applicator designed by Burnam and Crowe of Johns Hopkins, has been sulfate. The absorption capacity of a filter is proportional to its density. To absorb all Beta rays only 0.5 mm. of platinum, gold or tungsten is required; obtained which has aided considerably in results produced as well as diminishing the time of application. The active part of the new applicator is a monel metal tubular chamber 15 mm. in length, with an inside diameter of 1.7 mm., a wall thickness of 0.3 mm. and an outside diameter of 2.3 mm. The chamber contains 50 mgm. of radium, 1 mm. of lead or silver; 2 mm. of brass or monel metal and 10 mm. of aluminum. Even when all primary Beta radiation is absorbed there is a secondary Beta and Gamma radiation from the filter, which is most penetrating from metals of high density. This secondary radiation is not large from monel metal, and for the treatment of the nasopharynx, with this applicator a secondary screen of lighter material is not necessary.

The dosage that has been found most effective with this applicator is 8.5 minutes in each side of the nasopharynx. Uusually treatments are given at 25-day intervals and as a rule three treatments four or five may be necessary.

The author uses the following method of application: A 1% solution of cocaine is lightly sprayed into each inferior meatus. A cotton tipped applicator, moistened with three drops of 5% cocaine, is then gently passed along the floor of each in-

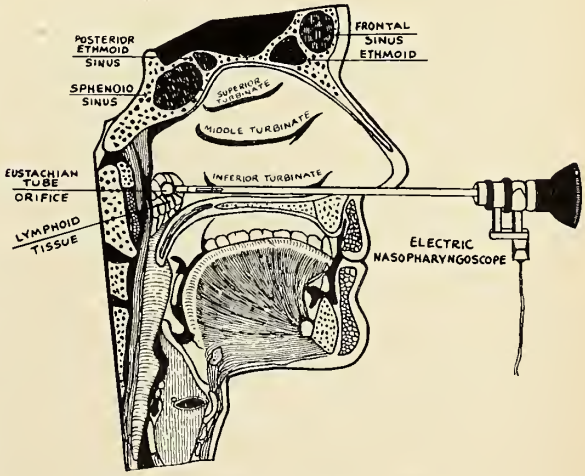


Figure II—Demonstrates the electric nasopharyngoscope in place in the inferior meatus. This electric telescope gives one a clear, concise, absolutely accurate picture of the nasopharynx and its contents.

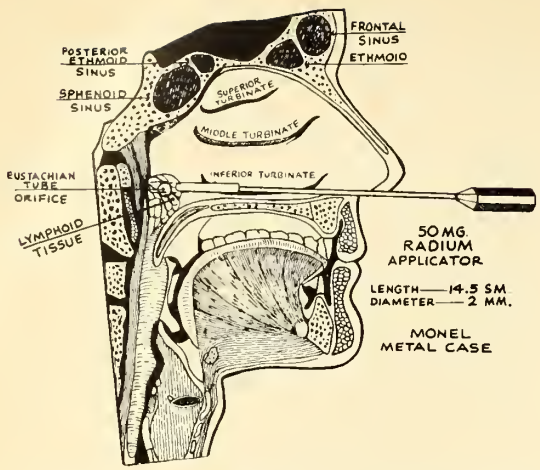


Figure III—Radium applicator shown in position. This illustration is not completely accurate, as in actual application, the central point of the radium capsule lies adjacent to the eustachian tube orifice.

ferior meatus. After an interval of five minutes, the radium applicator is inserted through the inferior meatus into the nasopharynx. An electric nasopharyngoscope is then passed along the opposite inferious meatus to see, under direct vision that the radium capsule is in its proper place at the orifice of the eustachian tube. The applicator is then left in place for 8.5 minutes, after which time it is removed and a similar treatment is given the opposite side of the nasopharynx.

During the first week following the treatment, there may be a slight subjective sensation of "stuffiness" or "fullness" in the nasopharynx, accompanied by a moderate increase in the amount of post-nasal discharge. This is followed by a diminution in the amount of post-nasal discharge, so that 30 days following treatment very little if any discharge is noticed. Examination of the nasopharynx, six weeks after treatment usually reveals definite diminution in the size of the lymphoid tissue, as well as a marked decrease in the amount of tenacious mucoid discharge.

The results obtained in treating deafness, particularly in children, associated with mal-function of the eustachian tubes; recurrent acute upper respiratory infections, especially those beginning with irritation in the nesopharyngeal lymphoid tissue; recurring attacks of otitis media; bronchial asthma, particularly in children; aero-otitis; tinnitus and vertigo, in selected cases; and chronic obstruction of the posterior nares in children by this method, have been uniformly good and exceedingly encouraging. There have been failures in approximately 11% of the cases thus treated, but I am certain that where failure of the desired end result has occurred, it was because I failed to give a sufficient number of treatments. This method of eradicating hyperplastic nasopharyngeal lymphoid tissue is easily and painlessly administered, causes no ill effects or loss of time from ones work, and is highly recommended as an adjunct in the elimination of a certain focus of infection.

BIBLIOGRAPHY

1. Fisher. Gilbert E.. Recognition and Radium Treatment of Infected and Hypertrophied Lymphoid Tissue in the Nasopharynx. (Preliminary Report) Archives of Otholaryngology, March 1943, Vol. 37, PP. 434-436.
2. Fisher, Gilbert E., Recognition and Radium Treatment of Nasopharyngeal Lymphoid Tissue. Southern Medical Journal, October 1943, Vol. 36, No. 10, PP. 702-703.
3. Heinlke, H., Mitt. A. D., Grenzgeb: d. Med. u. Chir., 14-21, 1905.
4. Akaiwa. H.. and Takeshima, M., The Reaction of Lymphoid Tissue to Roentgen Radiation. American Jour. Roentgenol. and Rad. Therapy, 24:42-46, 1930.
5. Crowe, S. J., The Nasopharynx, Arch. of Otolaryngology, April 1941, Vol. 33, PP. 618-622.

(Reprint from Mississippi Valley Medical Journal)

PLAGUE AUTHORITY SAYS LEPROSY IS NO LONGER A HORROR DISEASE

Approximately 400 persons in the United States are suffering from leprosy, one of the oldest of known diseases, and N. E. Wayson, M. D., noted plague authority in the U. S. Public Health Service, says that in view of modern medical concepts it is folly to associate horror and superstitition with the disease.

Writing in the September issue of *Hygeia*, the magazine of the American Medical Association, Dr. Wayson says that "the condition of nearly all patients improves definitely within a short period after entering a well conducted hospital. An increasing percentage of patients in these hospitals are discharged as arrested and return to their home environments and useful occupations."

Dr. Wayson, who once served as director of the Leprosy Investigation Station in Honolulu, says that leprosy is now considered an infectious disease, caused by a germ or micro-organism which enters the body through either the nose or throat or skin and may be distributed throughout all the tissues of the body.

"This particular bacterium," the article said, "can be found in the tissues in various forms of the disease and has been accepted as its cause for that reason, although it is not discovered every lesion (wound) or tissue change appearing during the course of the disease. However, at present there is no accepted proof that this bacterium has ever been grown in test tubes in the laboratory, nor that the disease has been produced artificially in man or in lower animals by inoculation.

"The onset of leprosy is insidious and without a characteristic evolution which permits determination of the time it invades the body, nor the length of time it has been incubating in the tissues before it becomes evident.

"Bones of the fingers or toes may soften, shrink or even break spontaneously. When acute inflammation occurs in and around nerves, severe pain is produced, but leprosy is otherwise a relatively painless condition."

Dr. Wayson points out that the course of the disease may be short or it may continue for as many as 50 years. Arrest may come in the early stages, or later.

"Only a relatively small percentage of leprous persons can be said to die of leprosy," he said. "A large proportion die because of intercurrent affliction. Many die of tuberculosis and disease of the kidneys.

"So far as is known, leprosy is communicated directly from those in whom the disease is active, and not from those who have had it and have recovered, even though they are crippled and scarred. . . . The conclusion is reached that leprosy is not easily communicated from the sick to the well. Under conditions which are favorable to the communication of leprosy, as high a percentage of children of a household may contract the disease as would contract tuberculosis under conditions conducive to its spread.

"Hygiene and treatment which contribute to the support and well-being of the patient are beneficial in practically all cases. Measures which restrict or eliminate association with well people, and particularly with children, reduce the likelihood of the occurrence of new cases."

Reprinted from A. M. A. News, Sept 6, 1945.

DOCTORS AND HOSPITALS

Anyone endeavoring to speak on the future retionship of physicians and hospitals needs to be a bit of a seer. I am not sure that prophesying is exactly my specialty, but I do foresee a change, for existing association is not good enough to meet the problems of the future. There must be mutual trust and understanding and neither group must attempt to dominate the other.

By the very nature of his profession the physician is an individualist trained to think for himself. By the same token he is jealous of his rights, and rightly or wrongly, resents what may appear to be infringement of them. On the other hand, the numerous and difficult problems of hospital administration quite often are not fully understood by the physician, and this leads to his misinterpretation of the hospital's motives. Our differences hardly constitute a problem and are readily correctible by conferences and discussion to promote better understanding of our real problems.

We must remember that we both have the same interests and motives and that one cannot get along without the other. Today we are working in the right direction, and medicine and hospitals are willing to co-operate with any group that will work with it in solving the immense problems facing us. If we are to maintain the private system of medicine, the full co-operation of the hospital group, the medical profession, the nurses and those companies writing non-profit medical and hospital insurance is absolutely essential.—

William B. Rawls, M. D., in Bull. Med. Soc., County of Kings.

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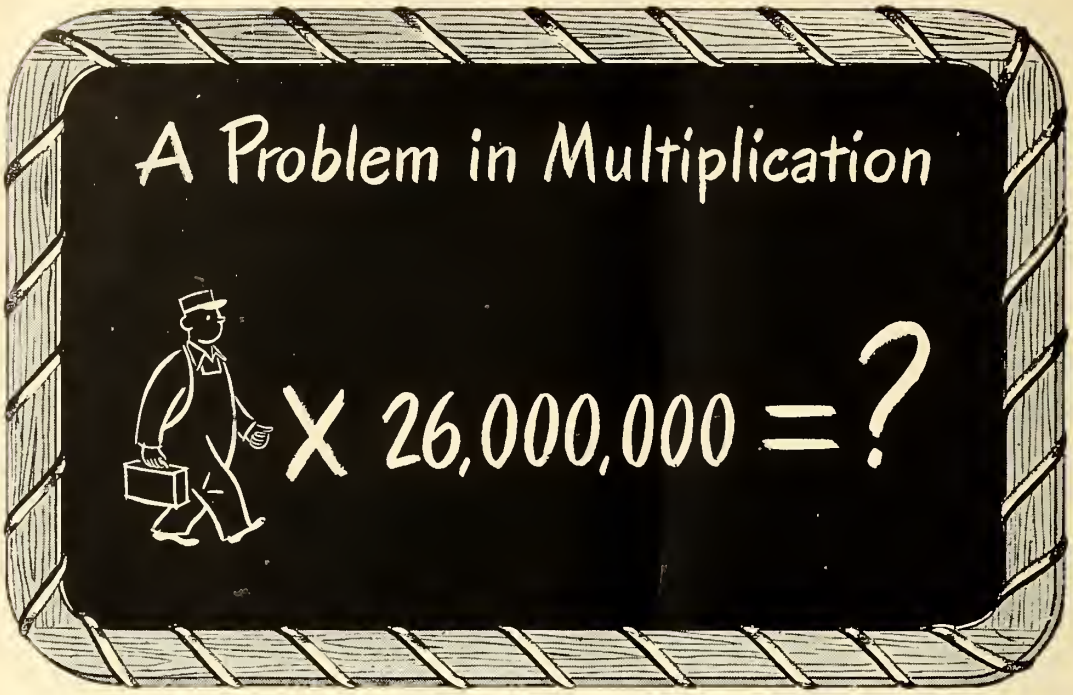
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ANNUAL DUES FOR 1946 ARE NOW DUE AND PAYABLE TO:
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THE AMOUNT OF STATE ASSOCIAION DUES (See: Note below)	$30.00 per each active member; $15.00 per each associate member.
EACH COUNTY MEDICAL SOCIETY	Collects the state association dues from each county member and remits same to the association as per above.
MEMBERS IN SERVICE	Are carried on the state roster without payment of dues while in the service provided they were members in good standing at the time they entered service. On returning to practice, dues are again payable.
MEMBERSHIP WITH THE AMERICAN MEDICAL ASSOCIATION	An active member of the state association automatically becomes a member of the American Medical Association without remittance of dues to that organization.
FELLOWSHIP WITH THE AMERICAN MEDICAL ASSOCIATION	A member of the American Medical Association wishing to become a Fellow of the same organization, makes direct application to the American Medical Association and upon acceptance by that organization and the payment of Fellowship dues, direct to the American Medical Association, receives fellowship credentials.

NOTE: An Active Member of the Arizona Medical Association is licensed in the state and engaged in private practice. An Associate Member is one not licensed to practice in the state and is engaged in some branch of the federal service—Indian Service, Veterans' Administration, researchist, teacher, or the like—and not engaged in private practice.

BRONZE STAR MEDAL AWARD

The War Department has just announced the following award of the Bronze Star Medal:

Arizona—Captain Merle M. Musselman, MC, Tucson.

MEDICO - LEGAL SECTION

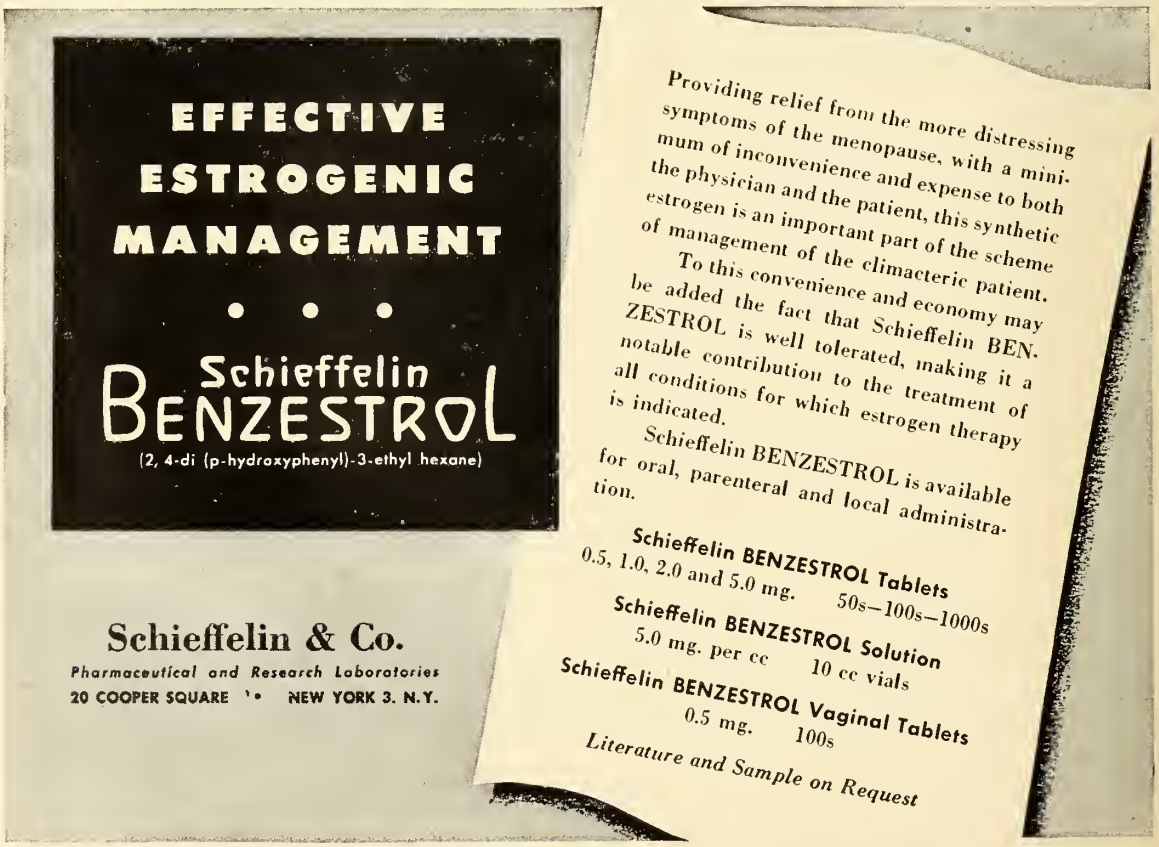
Industrial Insurance: The Industrial Commission has final word over Medical Advisory Board on question of continued disability.

IN THE SUPREME COURT OF THE STATE OF ARIZONA

MORGAN, J.:

This a rather extraordinary case. There is no contest as to the actual facts. Petitioner, a man about 53 years of age, weighing 114 pounds, a painter by profession, was injured while in the employ of the respondent A. E. Wensel, on April 13, 1942. In the process of lifting and moving a 70 pound ladder he lost his balance. In an effort to prevent the ladder from falling on a window of the house, he severely wrenched or strained his back, the immediate effect being a sharp pain in the lower part of his back. He completed his work that day with considerable difficulty. He was bedridden for some time, and was thereafter unable to work. It is conceded that since the date of the injury he has not been able to perform any manual labor which entails in any way the use of his back.

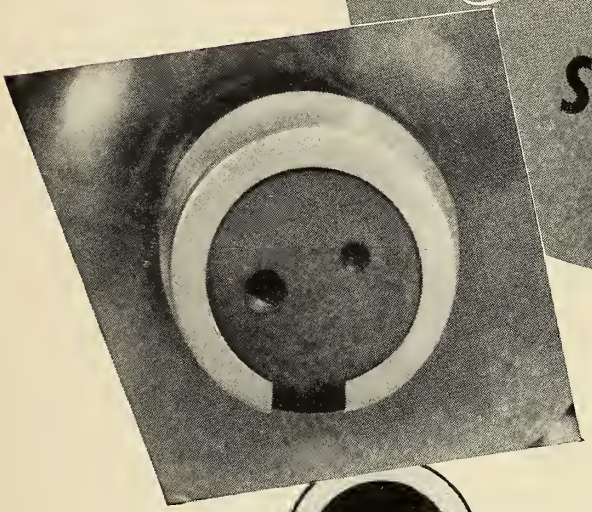
The accident was not reported to the Commission until August 17, 1942. Later that year a formal claim was filed. Petitioner was awarded compensation totaling $2,102.47 for the period August 17, 1942, to November 29, 1943. During all of the year 1943, up to November 8th, the petitioner was under the care and observation of doctors whose services were paid for by the commission. The only objective symptoms discovered were a very narrow disc space between the vertebral body and base of the sacrum, causing them to be almost in contact, and a condition described as fascitis, an inflammation of the tissues covering the left buttock muscles of a cordlike character. Either of these conditions could have resulted from the trauma (pressure) and strain (tearing) incident to the injury. The subjective symptoms were continual pain and tenderness in the region of the lower vertebrae on the left side and the left buttock. Various tests applied



ANOTHER

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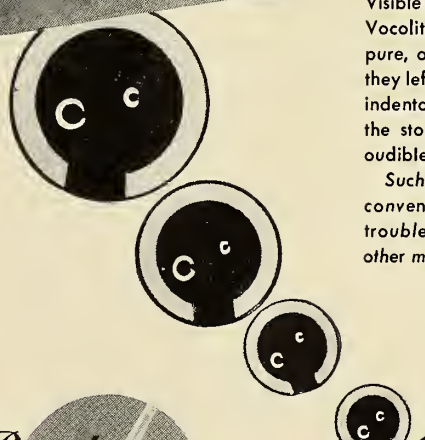
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Shaw Surgical Co. *Portland*
Southwestern Surgical Supply Co. *Phoenix*
Spokane Surgical Supply Company *Spokane*

rule out any possibility that petitioner's condition was the result of any disease, infection, constitutional or postural defect. Prior to the accident he had never suffered from backache, had sustained no injury and lost no time. He was not malingering.

On November 8, 1943, the medical advisory board examined the petitioner, they filed a report as of that date finding the medical facts substantially as above set forth. Their conclusion was, "As a result of our examination it is our opinion that any disability he may have suffered as a result of his accident has terminated."

Based upon the opinion of the board, the commission stopped compensation. Petitioner protested. On October 20, 1944, he was given a rehearing. He produced numerous witnesses of unquestioned veracity, several being ministers, who testified that from the period November 29, 1943, up to the date of rehearing the petitioner continued totally disabled. It is admitted that reports of the commission's own investigators confirmed this fact. The petitioner was without means to employ medical experts to report on his condition. The commission did not have him examined by its own doctors or experts after November 8, 1943.

On November 20, 1944, the commission confirmed its award of the previous year, and found that the petitioner had no disability as a result of his injury from and after November 29, 1943. Through the usual certiorara proceedings this award comes before us. This court has uniformly held that where the order of finding of the commission is based on reasonable evidence, it will be upheld. The only evidence in the record which supports the commission's order is the conclusion of the medical board, as made on November 8, 1943. The sole question is, does this conclusion afford reasonable evidence to support the award. If it does not, the case must be reversed and the order set aside.

In the late case of Hoffman v. Brophy, (Ariz.) 149 Pac. (2d) 160, we pointed out that the commission was under a statutory duty to determine the extent of industrial disability. Thus, where the medical board made a finding that a man was physically disabled twenty-five percent, that this did not mean he was disabled only to that extent industrially. Obviously, a twenty-five per cent physical disablement might, and in many cases does, have the effect of preventing the person so disabled from following his usual occupation, or being employed at any manual labor. In such case the injured person would have an industrial disability of one hundred percent. The Hoffman decision has application here. It is for the commission, not the medical board, to determine whether or not disability has ceased. The

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commission should, and must, give due weight and consideration to the medical board, but it is not bound by its conclusions, particularly where the conclusions are wholly unsupported by the actual facts, or, as here, contrary to the medical history and findings. It is the medical findings rather than the conclusion which constitute evidence. Obviously, the conclusion or opinion which is counter to the actual facts or findings, and which on the face of the record is illogical and without support, cannot be treated as reasonable evidence.

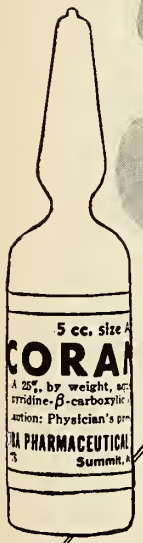
We have carefully read the report of the medical board. As already observed, the various examinations made by competent doctors disclose that petitioner's disablement is not the result of any disease, infection or other natural defect. There was no improvement in his condition; he had the same tenderness; the condition described as fascitis still existed. There is no showing that the narrow disc space between the vertebral body and base of the sacrum had become normal. The petitioner was still disabled. There is nothing to indicate from the record that petitioner's condition was from any cause other than that which might well have resulted from his injury. The report is replete with showings that petitioner's condition was not the result of any disease or other like cause, but there is no finding in the report that his condition was not caused by, or was the result of, the injury. From the board's own report we can find no support for its conclusion and are, therefore, constrained to hold that no reasonable evidence exists in support of the commission's findings.

In fairness to the commission we add that its reliance on the medical board's conclusion may have been induced by misunderstanding of former expressions of this court pertaining to the weight of medical opinion in certain cases. We note that the referee at the rehearing called attention repeatedly to the fact that the petitioner had produced no medical evidence. His financial status did not permit him to employ doctors. This, however, should not deprive him from consideration. In the final analysis, it was the commission's right and duty to determine whether or not the petitioner's disability had ceased or was continuing. The decisions which may have caused the commission to follow the conclusion of the medical board to the exclusion of the admitted facts when properly considered have no application to the situation existing in this case.

In Ison v. Western Veg. Distributors, 48 Ariz. 104, 59 Pac. (2d) 649, this statement was made: "Like most cases, where the injury is not an immediate and patent one, such as the loss of a member or a broken limb, the question of casual relation between the accident and the disability depends upon expert medi-



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cal testimony." It will be noted that this is not a rule of general application, but it applies in "most cases." In that case the commission had the testimony of two experts who differed as to the causal relation between the accident and the disability. One took the position that the condition of the applicant was a result of the injury. The other ascribed his condition to natural causes wholely unrelated to the injury. There is no such showing or difference of opinion in this case, the findings here being to the effect that the petitioner is suffering from no disease or other natural cause.

We said in Caeko v. Stanley Fruit Co., 55 Ariz. 72, 98 Pac. (2d) 471, that where the result of an accident is not clearly apparent the question of causal relation of the accident to the condition of the injured party "can *usually* be answered only by expert medical testimony." This is true. In that case the commission had many different reports, (1) that the petitioner is suffering from a disease known as myesthenia gravis resulting from his accident, (2) his condition is caused by psychoneurosis arising out of the accident, (3) he is a plain malingerer, (4) it was produced by hypertrophic arthritis, and (5) that it is the result of an intragastric malignant tumor. Each of these opinions was supported by reputable medical testimony. Obviously, such situation does not exist here. The opinion or conclusion of the medical board, as we have already pointed out, is not supported by the medical testimony or findings. Here, stated in the simplest terms, we have a case where a man has been injured. His disablement continues. The medical experts cannot ascribe his disablement to disease or to any natural cause. They do not set out any medical history which would show or tend to show that his condition did not result from his injury. The medical history indicates that whatever disablement he has is a result of injury. It is the only cause existing.

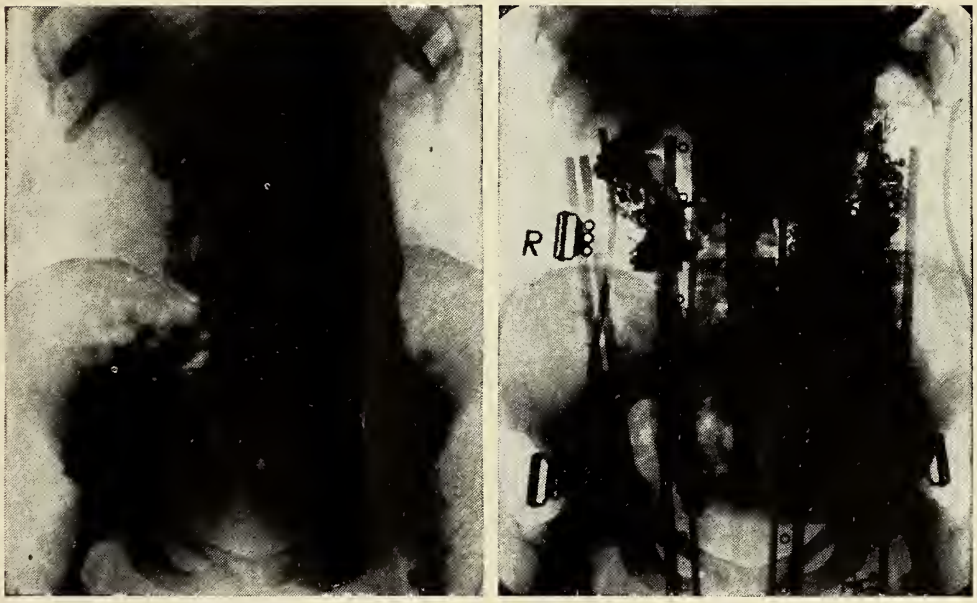
Since, in our judgment, there is no reasonable evidence supporting the findings of the commission, the award is set aside.

Book Reviews

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1944. Cloth. Price, postpaid, $1.00—pp. 238. Chicago: American Medical Association, 1945.

The Council on Pharmacy and Chemistry recently issued the thirty-sixth edition of the Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association. This volume contains in compact form not only the reports of the

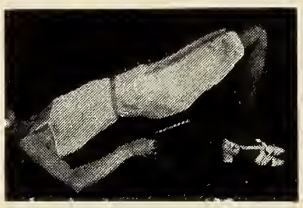
WHEN *digestive symptoms and general malaise are accompanied by marked downward displacement of the viscera, they are often relieved by* ANATOMICAL SUPPORT.



X-Ray of patient with visceroptosis. (Left) The lesser curvature of the stomach is below the crests of the ilia. (Right) X-Ray of same patient after application of Camp Support for visceroptosis indicating how the viscera is held in a more nearly normal position.

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Council which have been published in THE JOURNAL during the past year but also some additional reports which were not considered of sufficient importance to be published in THE JOURNAL.

The present volume is quite unusual in that it contains not one report concerning a product found unacceptable. However, there are five reports on the omission of products from New and Nonofficial Remedies, mainy for the reason that they have outlived their usefulness, and in most cases the manufactnrers have expressed their lack of desire for continued inclusion of their brands. These reports are: Erysipelas Streptococcus Antitoxin and Anti-erysipelas Serum omitted from New and Nonofficial Remedies; Ichthammol Preparations, Isarol, Ichthynat, Ichthyol, omitted from New and Nonofficial Remedies and Soluble Ichthammol, not within the scope of New and Nonofficial Remedies; Iodine Compounds, Iodalbin and Stearodine; Iido-Casein, Iothion and Iodostarine, omitted from New and Nonofficial Remedies; Mercuric Oxycyanide, Mercuric Salicylate and Mercuric Succinimide, omitted from New and Nonofficial Remedies and Status of Antimeningococcic Serum and Meningococcus Antitoxin.

This volume is a veritable mine of information on subjects of general interest to the physician, pharmacist and the pharmaceutical manufacturers. The reports concern deliberations of the Council on general subjects ranging from the use of the Electron Microscope to the appraisal of new drugs. The report on Pathogenic Bacteria, Rickettsias and Viruses as shown by the Electron Microscope is noteworthy as being pioneer work in this field. The report on the Current Status of Prophylaxis by Hemophilus Pertussis Vaccine was prefatory to the acceptance by the Council on various brands of pertussis vaccines and pertussis vaccine combinations. The valuable and highly informative article on Local Treatment of Thermal Cutaneous Burns reports on the latest and best work in this field.

New and Nonofficial Remedies, 1945, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1945. Cloth. Price, postpaid, $1.50, pp. 760. Chicago: American Medical Association, 1945.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy



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and Chemistry of the American Medical Association as of January first is published in book form under the title "New and Nonofficial Remedies." The book contains the descriptions of acceptable proprietory substances and their preparations, proprietary mixtures if they have originality or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

Some fifteen or twenty newly accepted preparations appear in the 1945 volume. A large number of preparations have been omitted, mainly brands of official preparations. The general statement concerning these pharmacopeial preparations has been retained for the information of physicians.

As stated in the preface, the entire book has been scanned to bring it up to date with the latest medical knowledge. It is noted that the section "Articles and Brands Accepted by the Council But Not Described in N. N. R.," a vestigial remnant of which appeared in the 1944 volume, has now entirely disappeared.

This section appeared to have been a catch-all for brands of official articles, the acceptance of which the manufacturers desired for reasons of prestige, and miscellaneous preparations which were not necessarily or importantly within the Council's scope and which did not require detailed description. Many of the official preparations have been transferred to the body of the book and the others deleted. One is struck by the large amount of medical information contained in this volume. Certainly no other compendium of comparable price contains so much.

"MEN UNDER STRESS (In and After Combat). By LT. COL. ROY R. GRINKER, M. C., Army Air Forces; formerly Fellow of the Rockefeller Foundation and Chairman of the department of Neuropsychiatry, Michael Reese Hospital, Chicago, and MAJOR JOHN P. SPIEGEL, M. C., Army Air Forces, formerly of the Department of Psychiatry, Michael Reese Hospital, Chicago. The Blakiston Company, 1012 Walnut St., Philadelphia 5, Pa. 484 pages, $5.00. (Published June 20, 1945.)

The authors have fortunately provided the psychiatrist with a fund of knowledge of the reaction of men under stress of war. The book is written with a minimum of vague just-off-the-press psychiatric terms and thus makes it readable for all practitioners of medicine who will find it necessary reading in these times.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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The discussion of procedures of therapy used in combat areas where the pressure of time forces the physician to adopt short-cuts is interesting. The therapeutic value of narcosynthesis as a short-cut is firmly established as a procedure. The procedure is both investigative and therapeutic.

In the chapter on General Social Implications the authors advance the cause of psychiatry first, by suggesting the modification of length psychiatric diagnosis and a better understanding of psychiatry. Second, by shorter and less time consuming methods of treatment. The authors also pose questions which have been discussed for years without conclusion, in particular, "planned parenthood." The problem of the returning psychiatric casualty is brought in interesting questioning.

This book is well worth the reading.

LOUIS J. SAXE, M. D.

"COMMON AILMENTS OF MAN." Edited by Morris Fishbein, M. D., Editor of the Journal of the American Medical Association, and of Hygeia, the health magazine; Chief Editor of War Medicine. Published by Garden City Publishing Co. Price, $1.00.

This book, edited by Dr. Fishbein, consists of seventeen chapters, each discussing a subject. The subjects are as the title implies: the common ailments of man, and includes headache, acute colds, sinus trouble, neuritis, hemorrhoids, constipation and various others. Each chapter is discussed by a well-known medical authority in his particular specialty. While the book is written mainly for the lay mind, nevertheless it is worthwhile reading for the general practitioner, and any physician in other than his own specialty, as it brings everything up to date. If any criticism is to be offered, it is that these ailments are discussed with the impression that they are conditions which the human is endowed with to endure. The facts are that with the elimination of the so-called catastrophic illness, these complaints constitute the great bulk of the private practice of medicine, and represent the very place when a regimented or socialized system of medicine will end in a complete dismal failure.

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LAS ENCINAS, PASADENA, CALIF.

BRIEF HISTORICAL NOTES ON MEAD'S CEREAL, PABLUM AND PABENA

HAND in hand with pediatric progress, the introduction of Mead's Cereal in 1930 marked a new concept in the function of cereals in the child's dietary. For 150 years before that, since the days of "pap" and "panada," there had been no noteworthy improvement in the nutritive quality of cereals for infant feeding. Cereals were fed principally for their carbohydrate content.

The formula of Mead's Cereal was designed to supplement the baby's diet in minerals and vitamins, especially iron and thiamine. How well it has succeeded in these functions may be seen from two examples:

(1) As little as one-sixth ounce of Mead's Cereal* supplies over 50% of the iron and 20% of the thiamine minimum requirements of the 3-months-old infant. (2) One-half ounce of Mead's Cereal furnishes all of the iron and 60% of the thiamine minimum requirements of the 6-months-old baby.

That the medical profession has recognized the importance of this contribution is indicated by the fact that cereal is now routinely included in the infant's diet as early as the third or fourth month instead of at the sixth to twelfth month as was the custom only a decade or two ago.

In 1933 Mead Johnson & Company went a step further, improving the Mead's Cereal mixture by a special process of cooking, which rendered it easily tolerated by the infant and at the same time did away with the need for prolonged cereal cooking in the home. The result is Pablum, an original product which offers all of the nutritional qualities of Mead's Cereal, plus the convenience of thorough scientific cooking.

During the last twelve years, these products have been used in a great deal of clinical investigation of various aspects of nutrition, which have been reported in the scientific literature.

Many physicians recognize the pioneer efforts on the part of Mead Johnson & Company by specifying Mead's Cereal and PABLUM—and also the new Pablum-like oatmeal cereal known as PABENA.

*Pablum, the precooked form of Mead's Cereal, has practically the same composition: wheatmeal (farina), oatmeal, cornmeal, wheat embryo, beef bone, brewers yeast, alfalfa leaf, sodium chloride, and reduced iron.

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